DOCTOR OF BUSINESS (DBA)

Understanding Transactional Change in Higher Education Institutions: A Case Study

Kamensky, Helene

Award date:
2019

Awarding institution:
University of Bath

Understanding Transactional Change in Higher Education Institutions: A Case Study

Helene Kamensky

A thesis submitted for the degree of Doctor of Business Administration
(Higher Education Management)

University of Bath

School of Management

October 2019

Signed on behalf of the Doctoral College…… (Jacqueline Stockley)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACKNOWLEDGEMENTS

This thesis could not have been written without all those who cooperated, contributed and inspired me to conduct this research. My special acknowledgement goes to my host organization, KU Leuven. It is my great pleasure to convey my sincere thanks and appreciation to the university leaders who participated in this study for their time and input to my research. I would like to express my special thanks to Professor Koen Debackere who gave me a comprehensive picture of organizational decision making and at the later stage of my research, provided me with valuable feedback that helped me to sharpen my research perspectives. My sincere gratitude goes to Dr Paul Van Dun for believing in this project and his distinctive insights into the implementation of change in the broader context of the KU Leuven history, organizational structure and management practices. I especially want to thank Dr Wim Fyen for his generous time, valuable insights and superb support since the inception of this research project. I am also most grateful to all my interviewees for their cooperation, openness, candour and ideas that shaped my thinking on issues of organizational change and backed up my research propositions with evidence.

I would like to express my sincere gratitude to my supervisors, Professor Robin Shields and Professor Jürgen Enders, for their advice, support and guidance throughout the entire process. Their constructive criticism and comments provided much food for thought and helped me a lot in accomplishing this research project. My heartfelt appreciation and thanks also go to the DBA(HEM) Programmes Officer, Jacqueline Stockley for her most efficient professional support. I would also like to thank my viva examiners, Professor Linda Evans and Dr Hong Bui, whose thorough comments and suggestions have helped me to improve my thesis.

Finally, I am extremely grateful to my family who instilled in me a desire for learning and cultivating knowledge throughout life. And my very special gratitude goes to my husband whose inspiration, continuous support and encouragement made this thesis possible.

ABSTRACT

As the scope and pace of changes currently being faced by higher education institutions (HEIs) continue to grow, issues of how to accelerate internal change processes in universities are taking centre stage. Nevertheless, there has been limited research on organizational change that takes the university as a unit of analysis (Fumasoli & Stensaker, 2013; Bastedo, 2012); hence, many aspects of organization change phenomena in universities remain understudied. The purpose of this thesis is to enhance an understanding of the transactional change dynamics in universities as organizations. The goal is to interpret and to explain how transactional change – an incremental, evolutionary change for continuous improvement largely concerned with day-to-day operations (transactions) of the organization (Burke, 2014) - emerges and evolves in a university setting. The thrust on examining transactional change within an HEI will be to look at the extent to which transactional dimensions of the Burke-Litwin Model of Organizational Performance and Change – organizational structure, policy frameworks, management practices, and climate - provide an explanation of how transactional change occurs in universities as organizations. While striving for a deeper understanding of the transactional change dynamics within an HEI, the study also seeks an explanation of how the antecedent factors influence transactional change processes throughout the institution.

The research employs a qualitative, explanatory, single-case study methodology. The case has been examined through 42 interviews with senior leaders, administrative staff, faculty members, students, researchers, entrepreneurs, and external stakeholders.

The results show that antecedent factors significantly affect transactional change processes within the HEI. Their influence is reinforced by the impact of the transactional dimensions, individually and in synergy, on the organizational climate. Together, structure, policy frameworks, management practices, and climate create an organizational environment that makes transactional change occur in the university setting. Overall, the study contributes to the academic literature in several important respects: (1) by deepening understanding of how the transactional dimensions foster change in HEIs, (2) by developing a systemic approach to the deconstruction of the transactional change phenomenon in HEIs, (3) by offering the 5-dimension model of transactional change in higher education, (4) by deepening the scholarly knowledge on how to forge links between planned and emergent change through multidimensional change agency model; (5) by explicating the effect of loosely coupled nature of universities on the implementation of incremental changes within an HEI.

CHAPTER 1 INTRODUCTION

1.1 Statement of the problem

Modern higher education institutions (HEIs)[1] operate at a time of tumultuous change. The driving forces behind the change include globalization, knowledge-driven economy, information and communication technology, demographic changes, increasingly competitive environment, declining state support and resultant financial constraints, growing demands of society and the widening range of stakeholders, the power and influence of 'new managerialism' over education through the adoption of policies, practices and values characteristic of the private sector, the changing role of faculty and new models of faculty work and student learning. Duderstadt (2000) contends that "we live in an area of breathtaking and accelerating change. If education was once simpler, our world was simpler too" (Duderstadt, 2000: 3). Arguing along the same line, Stensaker (2015) points out that modern universities have to change, "both due to internal developments and external dynamics" (Stensaker, 2015: 103). Overall, as Hénard and Roseveare (2012) indicate, the complexity of changes underpinned by the uncertainty of society and the economy will urge universities to adapt continuously while maintaining high-quality standards (Hénard & Roseveare, 2012).

Against this backdrop, universities are confronted with the need to introduce ongoing systemic changes to enhance performance. It is becoming increasingly important to develop mechanisms and models for engaging staff and students in "incremental transactional changes, changes that are tied to and guided by an organizational vision for change" (Harvey & Broyles, 2010: 15). Clark (1997) makes much the same case by saying that rapid developments raise major issues of how to energize the operational sites of research, teaching and learning for continuous improvement as well as to advance the organizational capacity to relate changing internal strengths to fast-altering environments. He also contends that "the tools of institutional self-development now move to centre stage in higher education" (Clark, 1997: xiii-xiv).

Despite the need to enhance scholarly knowledge of how to stimulate institutional self-development in higher education, research has given less attention to the university as a unit

[1] In this study, the term „higher education institutions (abbreviated as HEIs)" refers to various types of higher education institutions including research universities.

of analysis as compared to policy issues (Fumasoli & Stensaker, 2013). Fumasoli and Stensaker (2013) note in this respect that "research in higher education has somewhat neglected the complex reality of the university as an organization possessing its own structures, cultures and practices" (Fumasoli & Stensaker, 2013: 479). Additionally, the literature review suggests that the existing research has focused largely on organizational transformation including higher education (e.g., Dolence & Norris, 1995; Hooker, 1997; Eckel, Hill & Green, 1998; Duderstadt, 2000) and in this framework, on the 'why' of change and the 'what' of change within an HEI (e.g., Newman, Couturier & Scurry, 2004; Ehlers & Schneckenberg, 2010). However, there are substantially fewer studies on 'how' to develop the organizational capacity for realizing and sustaining institutional change, especially in a HE context (Toma, 2010; Meyer & Stensaker, 2006). As Kezar (2001) aptly notes, some gaps in our knowledge of change have been hidden "because change has mostly been studied at the overall institutional level, through leaders or in relation to leaders' needs often without acknowledging the loosely coupled aspects of the system" (Kezar, 2001: 125).

Given the above, the organizational change literature highlights the need to deepen the research on several key areas crucial to fostering and managing change in institutions of higher education. Thus, more research is needed on how external forces support change since the external environment has been predominantly portrayed as a threat in the extant literature (Kezar, 2001). Far too little research has been conducted on how to enhance the evolution of emergent change in universities as well as on how and why continuous change happens within an HEI (Kondakci & Van den Broeck, 2009). Further research and empirical evidence are needed to get a grasp of how institutional arrangements and management practices enhance internal change dynamics in an HE setting. Entrepreneurial universities need further investigation (Kezar, 2001) where the internal organization is functioning essentially as an enabling factor in implementing change. Furthermore, "the few context-based studies have tended to examine one institution, and almost no research is multi-layer" (Kezar, 2001: 132). Lastly, a few studies have applied the Burke-Litwin Model of Organizational Performance and Change to an HE setting (Torraco, Hoover & Knippelmeyer, 2005; Hardy & Rossi, 2008; Smith & Martinez, 2015), particularly focusing on evolutionary change in universities as organizations. Overall, there is a strong need in case-based research on several related aspects of organization change phenomenon in higher education aimed to aid researchers and practitioners to develop a better grasp of how the organizational environments, external and

internal, can advance the evolution of incremental, transactional changes, thereby fostering the continuous improvement of universities as organizations.

1.2 Purpose statement

This study's aim is to enhance the understanding of the transactional change dynamics in an HE setting. The goal is to explore how transactional change - defined here as an incremental, evolutionary change for continuous improvement in the context of day-to-day operations (transactions) of the organization (Burke, 2014) - emerges and evolves in an institution of higher education. To address this research purpose, the study refers to the transactional components of the Burke-Litwin Model of Organizational Performance and Change (Burke & Litwin, 1992), i.e., organization structure, policy and procedures, management practices, and climate. This study uses the Burke-Litwin model as a heuristic research tool to understand the role of transactional factors in fostering a change-enabling environment within an HEI. While striving for a deeper understanding of the transactional change dynamics in an HE setting, the study also seeks an explanation of how the antecedent factors, both exogenous and endogenous, influence transactional change processes within the institution. The overall intent is to understand how transactional change evolves in the process of interaction between the external environment and various parties within an institution, viewed as a system.

This research derives from a single-case study focused on the implementation of Leuven Community for Innovation driven Entrepreneurship (Lcie), i.e., a university-wide transactional change initiative conducted by KU Leuven, Belgium. By providing a deep insight into the transactional change processes underpinning Lcie from the strategic, tactical and operational perspectives, the study strives to identify the focus areas that need to be addressed by universities that embark upon transactional change initiatives.

1.3 Theoretical framework

As suggested by McGaghie, Bordage and Shea (2001), a conceptual or theoretical framework "sets the stage" for the presentation of the specific research question that drives the investigation being reported" (McGaghie, Bordage & Shea, 2001: 923). The theoretical framework of this research is based on organization theories in higher education, theories of organizational change, and the Burke-Litwin Model of Organizational Performance and

Change. The theoretical and conceptual underpinnings of this research are briefly outlined below.

Organization theories in higher education help to get a grasp of the organizational and cultural specifics as well as the complexity of higher education institutions. In this framework, the study makes use of theories that spotlight distinctive features of universities as organizations, especially those that most likely influence transactional change processes within an HEI. *Theories of organization change* give a multi-lens perspective from which to consider the nature of organizational change phenomenon. The focus of attention is on the key factors underlying organization change dynamics, i.e., types of change; levels of change; content, process, and context of change. *The Burke-Litwin Model of Organizational Performance and Change* provides a conceptual lens for thinking about organizational change in a transformational-transactional way. Evolving from the open-system theory (Katz & Kahn, 1978) that views organizations as open systems affected by the external environment, the Model highlights critical parameters that are crucial for understanding change in organizations: the levels of change (the total system, the group, and the individual) and the magnitude of change (Burke & Litwin, 1992). From the vantage point of the magnitude of change, the Model is predicated upon "two distinct sets of organizational dynamics, one primarily associated with the transactional level of human behaviour – the everyday interactions and exchanges that more directly create climate conditions. The second set of dynamics is concerned with processes of organizational transformation: that is, rather fundamental changes in behaviour (e.g., value shifts)" (Burke & Litwin, 1992: 527). Accordingly, the Model specifies organizational dimensions that have a pivotal role to play in transformational and transactional change processes, thereby indicating which dimensions are to be changed and for what reasons. From the transactional change perspective, the Model puts in the foreground organizational structure, policies and procedures, management practices and climate as the main levers for this type of organizational change. From this emphasis, this study uses the Model as a heuristic tool to interpret and explain how organizational structure, policies and procedures, management practices, and climate facilitate transactional change processes within an HEI, both individually and through their interrelations. The Model that will be detailed in the literature review chapter forms the basis for the central research question and associated sub-questions of this study.

1.4 Research questions

The research questions underpinning this investigation are predominantly organized around the transactional dimensions of the Burke-Litwin model, i.e., organizational structure, policy and procedures, management practices, and climate, with an additional focus on the role of the antecedent factors, both exogenous and endogenous, in promoting and inhibiting transactional change within an HEI. The study addresses the central research question (RQ) and associated sub-questions (SQ) as follows:

RQ: How does transactional change occur in universities as organizations?

SQ1: What antecedent factors promote or inhibit transactional change in this organizational context?
SQ2: How does organizational structure induce transactional change?
SQ3: How do policy and procedures relate to the organizational structure?
SQ4: What are the management practices through which transactional change occurs?
SQ5: What are the likely impacts of structure, policy frameworks, and management practices on the working climate?

1.5 Methodology

This research takes a social constructionist, interpretive approach to formulate an understanding of the transactional change processes in a university setting. Based on the respective ontological and epistemological premises, this study employed a qualitative research methodology. Given that this interpretive study aims to delve into the specifics of the transactional change dynamics within an HEI, a single-case strategy was used for this research. The Leuven Community for Innovation driven Entrepreneurship (Lcie) - a university-wide transactional change initiative conducted by KU Leuven, Belgium - was selected for gaining insights into the intra-organizational change dynamics, based on the assumption that much can be learned from this case about how transactional change occurs in universities as organizations, with the relevance to both theory and practice.

The case study is explanatory in nature. The aim is to provide a holistic and richly descriptive explanation of the transactional change phenomenon (Lcie) in a higher education setting. The study employed three primary data collection methods: semi-structured, open-ended interviews that each lasted approximately one hour; documentation from a variety of

information sources and audiovisual materials. The launch and development of Lcie that engaged the academic community in transactional change processes was analyzed from the perspective of senior leaders, administrative staff, faculty members, students, researchers, entrepreneurs, and external stakeholders. Thirty-eight interviewees (with a total of forty-two interviews) provided their views on the dynamics of Lcie implementation revealing the importance of the external influences and the essential role of the organization structure, policy frameworks, management practices, and climate in stimulating transactional change throughout the University.

1.6 Definition of key terms

It is essential to define key terms at the beginning of the study to give precision to the scientific inquiry and to convey the relevant meanings to the readers (Creswell, 2014). In this regard, Wilkinson (1991) observes that "scientists have sharply defined terms with which to think clearly about their research and to communicate their findings and ideas accurately" (Wilkinson, 1991: 22).

In what follows, the study defines terms and concepts that are commonly used in relation to transactional change in organizations, thereby offering a useful framework for delving into the multifaceted nature of the transactional change phenomenon. Furthermore, these 'dynamic' concepts can take a variety of forms in different contexts, and consequently, are defined in the change literature in many, sometimes overlapping ways. Therefore, for the sake of clarity and precision, it is essential to specify the meaning of these terms in the framework of this research. Notably, the highlighted terms will be explained more profoundly in chapter 2 of this study.

- Continuous improvement – "can be seen as one of the activities whereby processes and procedures are implemented that contribute to organizational goals through the continuous improvement of work processes, workplaces, and work interactions" (Berling, 2000: 484).

- Emergent change – the approach is "based on the assumption that change is a continuous, open-ended and unpredictable process of aligning and realigning an organization to its changing environment" (Burnes, 2009: 596).

- Evolutionary change – "is typically an attempt to improve aspects of the organization that will lead to higher performance" (Burke, 2014: 98). Notably, as Burke (2014) indicates, Orlikowski (1996), as well as Weick and Quinn (1999), refer to a continuous change in place of evolutionary change; however, the meaning is essentially the same (ibid., 77).

- Organization change – "What we call organizational change is an ecology of concurrent responses in various parts of an organization to various interconnected parts of the environment" (March, 1981: 564).

- Transactional change – is an incremental, evolutionary change for continuous improvement, largely concerned with day-to-day operations. Burke (2014) says: "If… the changes needed are not as fundamental or transformational in nature – that is, what seems to be required is some fine tuning, improvements here and there, or changing some important parts of the organization but not the entire system – then we are talking about evolutionary, or transactional change" (Burke, 2014: 125).

1.7 Significance of the study

As indicated by Creswell (2014), the importance of a study is primarily determined by its relevance and applicability to a wide audience who can potentially benefit from key findings. From this perspective, Creswell (2014) suggests researchers provide reasons for how the study adds to the scholarly knowledge and literature in the field, helps advance practice as well as improve policy and decision-making. Following this line of thinking, this study aims to address the needs of researchers, change practitioners, middle managers, institutional leaders, and organizational consultants, thereby contributing to the academic literature, practice, policy and decision making in the fields of change management and organizational change in higher education (HE).

The study contributes to the scholarly knowledge and organization change literature in several ways. First, the study provides a new perspective on how the Burke-Litwin model can be employed to harness organization change, particularly in a HE setting, by using the Model as a heuristic tool to capture the role of structure, policy frameworks, management practices, and climate in creating a change-enabling organizational environment. Since the Burke-Litwin model centres on *what* to change and *why* to change in organizations, the Model has been

used for diagnostic purposes and to guide planned change (French & Bell, 1999; Martins & Coetzee, 2009). By adopting the modified approach to the Model, the study adds knowledge to the change management theory in three important respects: (a) by deepening an understanding of *how* the above-mentioned transactional factors enable and foster change in organizations including HEIs, both individually and through their synergy; (b) by developing a systemic approach to the deconstruction of the transactional change phenomenon viewed through the combination of lenses – that is, external and internal contexts affecting the intra-organizational change processes as well as leverage points for change at the individual, group, and system levels; (c) by offering the 5-dimension model of transactional change in higher education that can be used as an analytical framework for strategizing, inducing and managing change in universities as organizations. Second, the findings of this research deepened the scholarly knowledge on how to forge links between planned and emergent change through a multidimensional change agency model, thereby fostering the evolution of emergent change in institutions of higher education. Third, the study expands the understanding of how transactional change emerges and evolves throughout the university by elucidating the transactional change phenomenon from the multiple perspectives of senior leaders, administrators, faculty members, students, and external stakeholders. In so doing, the study brings into focus how the loosely coupled nature of universities as organizations affects the implementation of incremental, transactional changes within an HEI.

From the perspective of change management practice, the study offers insight into the managerial tactics and techniques for fostering the evolution of emergent change within an HEI. These include approaches related to (a) creating synergy between planned and emergent change; (b) fostering team building and teamwork; (c) using bootstrapping techniques to enhance change dynamics; (d) bringing together managerial and faculty values; (e) generating transactional change processes within the university that mobilize and energize the institution-as-system.

The study also makes explicit several ways to enhance policy and decision-making within an HEI from strategic (positioning/aims), tactical (design/organization) and operational (implementation/execution) perspectives (Van Assen, Van den Berg & Pietersma, 2009). *Strategically*, the study unveils pertinent approaches to (a) using the power of exogenous factors to effectuate transactional change within an HEI; (b) formulating and implementing institutional policy that fosters inspiration of faculty, staff and students to launch proactive

change initiatives and at the same time, ensures appropriate conditions for 'anchoring' the emergent change within an institution-as-system; (c) creating a 'protective' environment for change that has a twofold effect on fostering change at the university at large: for one, this approach provides an opportunity for the emergent change to evolve, for another, it creates conditions for 'disruptive change' that can happen outside the existing structures. *Tactically*, the study reveals how to organize processes, people and resources in an efficient way (Van Assen, Van den Berg & Pietersma, 2009) by (a) designing organization structures with a high level of both differentiation and integration; (b) fostering organizational professionalism as an essential precursor to change and development in universities as organizations. *Operationally*, the study contributes to fostering new thinking on how to enhance individual and group dynamics within an HEI by (a) engaging the academic community in 'stealth innovation' – that is, by launching a change initiative with a coalition of willing people and then, disseminating the results of the pilot projects throughout the organization, thereby convincing the organization members to embrace change; (b) using multi-dimensional change agency models, i.e., autonomous strategic units, leadership, middle management and self-directed teams, that altogether keep people excited about the ongoing change.

Overall, this study essentially contributes to bridging the gap between theory and practice, thereby responding to the call of Bunker, Alban and Lewicki (2004) who highlight the need to bring closer the worlds of academia and organizational consulting in order to facilitate a continuous introduction of new ideas, methods and approaches into practice (Bunker, Alban & Lewicki, 2004).

1.8 Organization of the thesis

This thesis consists of six chapters. Chapter one, the introduction, provides an overview of the study. Chapter two reviews theoretical and empirical literature on organization change including an higher education setting. The focus of attention is on the definition of organizational change; the key factors determining change dynamics (types of change; levels of change; content, process, and context of change); trends and issues in understanding organization change; complexities of change in higher education; the essential characteristics of universities as organizations. The chapter concludes with the discussion of the Burke-Litwin Model of Organizational Performance and Change which is used as a heuristic tool for understanding the role of organization structure, policy frameworks, management practices, and climate in creating an environment conducive to transactional change in an HE setting.

Chapter three provides a deep insight into the external environment and the institutional context in which the Leuven Community for Innovation driven Entrepreneurship (Lcie) was developed followed by the explanation of its rationale, implementation strategy, and significant outcomes. Chapter four details the research design and methodology underpinning this study including the theoretical orientations and philosophical assumptions, the rationale for adopting a qualitative explanatory single case study approach, the description of the data collection procedures, data analysis strategy and the validation of research. Chapter five provides a discussion of empirical data underpinned by the theoretically grounded reflection on the core themes as they have emerged out of the qualitative data analysis. Chapter six relates the key findings to the research questions; highlights the contribution of the study to the academic literature, practice, policy, and decision-making in the fields of change management and organizational change in higher education. The chapter concludes with recommendations for future research.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter lays out the theoretical foundation upon which to explore the key research question: "How does transactional change occur in universities as organizations?" It is essential to note at the outset that there is a voluminous and often misleading literature on organization change that abounds with conceptual complexities, ambiguous terminology, and contains sometimes contradictory theories and confusing research findings (Marshak, 2002; By, 2005; Fernandez & Rainey, 2006; Burnes, 2009; Van der Voet, Kuipers & Groeneveld, 2016). The internal inconsistency and theoretical incoherence of the organization change literature can be explained at least by four reasons.

Firstly, there are ambiguities in the current language for organizational change (Devos & Buelens, 2003; Marshak, 2002). As Marshak (2002) remarks: "The word 'change' has a variety of dictionary definitions connoting varying processes including, *to substitute, replace, switch, alter, become different, convert, and transform*… Furthermore, the generic term 'change' does not differentiate among different sources, types, or magnitudes of change. For example, 'fine tuning' and 're-engineering' are both organizational changes, as are changes to 'seize the initiative' or 'respond to competitor or market-place innovations'" (Marshak, 2002: 280). The imprecise language leads to implicit assumptions about organizational change and resultant terminological confusions.

Secondly, organizational change as a field of research and practice is interdisciplinary by nature, bringing in perspectives and approaches of different academic disciplines. Since major approaches tend to view organizations from their respective disciplinary angles, the created picture can be incomplete and unbalanced (Burnes, 2009). Furthermore, academic research gets insights from the practice-led literature and vice versa, which makes the overall picture of an organization change phenomenon even more complex and diverse.

Thirdly, the change literature is characterized by conceptual complexity grounded in different ontological and epistemological assumptions underpinning organization change research (Van der Voet, Kuipers & Groeneveld, 2016). Following Van de Ven and Poole (2005), researchers disagree about what organization change means and how to study it because of different ontological views, i.e., whether organizations consist of things or processes, as well as different epistemologies about variance or process methods for conducting research (Van de Ven & Poole, 2005). In line with the above, Buchanan and Bryman (2007) underscore paradigmatic diversity of the modern field of organization studies that demonstrates a variety of approaches including positivist, phenomenological, constructivist or postmodern perspectives.

Fourthly, and related, organizational research reveals theoretical instability (Pettigrew, Woodman & Cameron, 2001). Thus, there is no coherent, widely accepted, theory of organization change (Beer & Nohria, 2000; Devos & Buelens, 2003; Burke, 2014; Fitzgerald & McDemott, 2017). As Beer and Nohria (2000) put it: “An integrated theory or framework for understanding change does not exist. Academics and consultants often give very different and contradictory advice” (Beer & Nohria, 2000: 1). Burnes (2009) expresses this by saying: “…. we do not possess at present an approach to change that is theoretically holistic, universally applicable, and which can be practically applied” (Burnes, 2009: 3-4). Devos and Buelens (2003) go on to suggest that it is often difficult to identify common ground among existing organizational change theories.

In summary, the rich literature on organization change is filled with theories, concepts, models, and perspectives featuring multiple dimensions and components of the organizational change construct. It is essential, therefore, to focus this literature review in order not to lose

sight of the essential characteristics and critical factors pertaining to an understanding of a transactional change phenomenon in universities as organizations.

Because of the above, this chapter is organized as follows. The literature review starts with a discussion of various approaches to defining a change in organizations followed by the definition of organization change which will be used in this study. Then, the key factors underlying organizational change dynamics are considered, i.e., types of change; the level of change; content, process, and context of change. The next section reviews trends and issues in organizational research and practice, with the focus on studies that bring new insights into the intra-organizational change dynamics and thereby, merit consideration by exploring the phenomenon of transactional change in an HE setting. The subsequent part addresses the literature on the complexity of changes facing HEIs followed by a discussion of the distinctive features of universities as organizations considered from the viewpoint of their impact on the intra-organizational change processes. The literature review concludes with the discussion of the Burke-Litwin Model of Organizational Performance and Change, which is used as a heuristic tool for understanding how transactional change occurs in universities as organizations.

2.2 Defining organization change

Buchanan *et al.* (2005) point out that "a survey of the literature concerning an issue, phenomenon or concept must rely on an agreed definition, as a basis for selecting relevant sources" (Buchanan *et al.*, 2005: 190). Therefore, adopting a definition of organizational change to guide this research is an important starting point. As noted earlier, organization change is a multidimensional concept that takes a variety of forms in different contexts. Hence, there are numerous definitions of organizational change featuring diverse perspectives on its purpose, process, and outcomes. In this framework, the literature review spotlighted important observations concerning definitions of organization change outlined below.

In effect, two approaches to defining change dominate organization studies: one definition highlights an observed difference over time in an organization on selected dimensions; the other looks at change from a process-oriented perspective describing a sequence of events on how change unfolds (Van de Ven & Poole, 2005; Poole *et al.*, 2000). In the main, the research literature reviewed for this study supports this perspective. For example, Cawsey and Deszca (2007) define organization change as "*a planned alteration of organizational components to*

improve the effectiveness of the organization. By **organizational components** we mean, the *organizational mission and vision, strategy, goals, structure, process or system, technology, and people in an organization*" (Cawsey & Deszca, 2007: 2, italics and emphasis in original). In a similar vein, Barnett and Carroll (1995) contend that "organizational change involves, by definition, a transformation of the organization between two points in time. For most analysts, the key aspect of change comes from comparing the organization before and after the transformation" (Barnett & Carroll, 1995: 219). By contrast, the definition of organizational change suggested by Jones (2010) centres on "… the process by which organizations move from their present state to some desired future state to increase their effectiveness" (Jones, 2010: 31). In sum, while approaches to defining organization change may vary, frequently used definitions of organization change concentrate on the difference over time on selected organizational dimensions or take a process-driven perspective with a focus on a sequence of events underpinning development and change.

Another important observation is made by Kezar (2001), who points to definitional difficulties by distinguishing between generic definitions of organization change and those related to the specific models or theories. Kezar (2001) exemplifies her point with the definitions of Burnes (1996) and Van de Ven and Poole (1995). According to Burnes (1996), organizational change refers to the understanding of alterations within organizations at the broadest level among individuals and groups as well as at the collective level across the entire organization. Van de Ven and Poole (1995) contend that "change…is an empirical observation of difference in form, quality, or state over time in organizational entity" (Van de Ven and Poole, 1995: 512). For Kezar (2001) these definitions are generic because they do not capture the assumptions that inform different models or theories of change. Kezar (2011) argues that:

> Cultural and social-cognition theories of change would replace the word *observation* with the word *perception* in the second definition above. Theorists exploring change through a cultural or social-cognition perspective would examine not dimensions (typically, organizational structural characteristics such as size), but values or organizational participants' mental maps (Kezar, 2001: 12, italics in original).

Overall, Kezar (2001) concludes that it is difficult to find a common language relating to a multifaceted phenomenon such as organizational change.

In effect, the discussion above implicitly calls for various definitions of organization change covering specific aspects of this ambiguous construct. Notably, Reeves and Bednar (1994) make a similar point with regards to the concept of quality when they suggest that the complexity and richness of this construct make necessary to develop multiple definitions and models of quality (Reeves & Bednar, 1994). The authors also cite Cameron and Whetten (1983), who contend that "constructs such as intelligence, motivation, or leadership – whose construct space, by definition, is not bounded – have been better understood as limited aspects of their total meaning have been measured" (Cameron & Whetten, 1983; cited by Reeves & Bednar, 1994: 440).

In the framework of this study, the definition of organizational change is that as defined by March (1981). To March (1981), "what we call organizational change is an ecology of concurrent responses in various parts of an organization to various interconnected parts of the environment" (March, 1981: 564). As suggested by Soparnot (2011), this definition offers essential insights into the contents and the source of change by emphasizing the interconnections and interactions between the external environment and the elements of the organizational context. To quote Soparnot (2011):

> This definition directs us as much towards the contents of change, i.e. the solution, as towards its origin. Following the example of Pettigrew (1985), it emphasizes the idea of a contextual stance, which combines content, context and process. Change should, therefore, be analyzed on a number of levels: change as content (what it is that changes), as process (how it changes) and as context (why change is needed) and change as an interaction: change variables may be mutually defined in a series of interrelating elements (actions, reactions and interactions) (Soparnot, 2011: 641).

Extrapolating from Soparnot (2011), March's (1981) definition suggests a systemic approach to thinking about organization change rooted in a multilevel perspective on the interaction between various parties within an organization with elements of their environment. Overall, the view on the organization change underpinning this definition is grounded in a multidimensional perspective on the organizational change dynamics and thereby serves well for the purpose of this research.

In the following sections, key factors underlying dynamics of organizational change are considered: first, types of change; then levels of change; and finally, content, process, and context of change.

2.3 Types of organization change

The type of change connotes the character of change in an organization (Bouckenooghe, 2010). When characterizing the type of organizational change, Bouckenooghe (2010), distinguishes between transformational, planned, top-down change and transactional, emergent, incremental, bottom-up driven change. By (2005), following Senior (2002), uses three categories to explicate the type of change in organizations: 'change characterized by the rate of occurrence, by how it comes about and by scale' (By, 2005). In what follows, a review of the literature on change types is structured around two categories which are presumably most important for understanding transactional change phenomena in organizations: (a) the scale or magnitude of change; and (b) the way how change happens. In this framework, the literature review focuses on fundamental dichotomies underpinning each of the categories mentioned above, i.e., transformational versus transactional change and planned versus emergent change.

2.3.1 Scale or magnitude of change

There are numerous attempts to categorize the scale or magnitude of change in an organization. In this context, the same change dynamics are often described with different words and phrases (Marshak, 2002; By, 2005). Marshak (2002) notes in this respect that:

> …classifying the nature or magnitude of change has been a central concern of academics and consultants for over thirty years. If anything, trying to be clear about 'What kind of change are we talking about?' has become even more difficult in recent years… For example, academics may use the term 'punctuated equilibrium' (e.g., Gersick, 1991) to refer to the same change dynamic that executives and consultants may call 'radical', 'revolutionary', 'fundamental', or, increasingly, 'transformational' change (Marshak, 2002: 280-281).

Table 1, adapted and expanded from the work of Marshak (2002), provides a summary of some typologies and terms of organizational change.

Single variable: nature of change	
Greenwood & Hinings (1993)	Radical or incremental change
Greiner (1972)	Evolutionary or revolutionary
Miller (1982)	Evolutionary, revolutionary, and quantum
Bartunek & Moch (1987)	First-order, second-order, or third-order
Dunphy & Stace (1993)	Discontinuous or incremental
Burke & Litwin (1992)	Transactional, transformational
Van de Ven & Poole (1995)	Frame-breaking change and frame-bending change
Ackerman (1996)	Developmental, transitional, transformational
Weick & Quinn (1999)	Episodic or continuous
Buchanan & Huczynski (2004)	Shallow, deep and 'paradigm'
Multivariable: nature of change and ways of managing or focus	
Watzlawick, Weakland & Fisch (1974)	Nature of change combined with ways of managing leads to *refining existing processes and procedures*
Nadler (1998)	Nature of change combined with ways of managing lead to *tuning, adapting, redirecting and overhauling.*
Huy (2001)	Nature of change combined with focus of change leads to *commanding, engineering, teaching or socializing*
Palmer & Dunford (2002)	Nature of change combined with ways of managing leads to *directing, navigating, caretaking, coaching, interpreting or nurturing*

Table 1. Some typologies and terms of change. Adapted (and expanded) from Marshak (2002: 281).

The lack of agreed terminology and typology for characterizing the scale or magnitude of change challenges communication and research of organizational change efforts. At the same time, the terminological nuances and a variety of approaches to capturing the magnitude of organizational change are to be considered in relation to individual research and one way or another, various typologies deepen an understanding of organizational change dynamics. The purpose of this study is to research a transactional change phenomenon in an HE context. Accordingly, by reviewing the research literature on the organization change magnitude, the

focus is given to the publications exploring the distinction between the transformational and transactional types of change.

Transformational change. It should be noted that definitions and understandings of transformational change may differ, and sometimes significantly. In their extensive review of the literature, Tosey and Robinson (2002) identified multiple dimensions used to describe 'transformation'. At the most general level, however, there is a broad consensus that transformational change equals the fundamental change of a system. Accordingly, transformational change is often characterized as a 'revolutionary change' (Burke, 2014), a 'radical whole system change' (Marshak, 2002), a 'paradigm shift' (Nutt & Backoff, 1997) or 'frame-breaking' change (Hermon-Taylor, 1985). For example, Cameron and Ulrich (1986) claim that transformation implies a substitution of one state for a qualitatively different one. In other words, the result of the transformation is a change **of** systems, not a change **in** systems (Cameron & Ulrich, 1986). Similarly, Burke (2014) defines transformation or revolutionary change as a significant organization change leading to a change in mission, strategy, or culture (Burke, 2014). Anderson and Ackerman Anderson (2001) consider transformation as a radical move from one state of existence to another which requires a shift of culture, behaviour, and mindset. For Harrison (1995), transformation means a paradigm shift, i.e., a fundamental change of perceiving, understanding, and valuing the surrounding world. In summary, the transformation is distinguished by a profound change which takes place at the system level.

Another distinguishing feature of transformational change is its disruptive, discontinuous character, hence the often-used term revolutionary change. For example, Burke (2014) observes that this type of change occurs in spurts and disruptions, rather than in a steady, linear way (Burke, 2014). Admittedly, there are also proponents of the continuous transformation model who argue that organizations need to change themselves continuously in a fundamental way to survive (Burnes, 2004a). For example, Kanter, Stein and Jick (1992) note that transformational change can be achieved either by 'Bold Strokes' (major strategic initiatives with a rapid, significant impact) or 'long marches', i.e., smaller initiatives that will lead to transformation over a lengthy period of time. However, much of the research literature addresses transformational change as a "multidimensional, multi-level, discontinuous, radical organizational change involving a paradigmatic shift" (Levy & Merry, 1986: 5).

Transactional change. This type of organizational change is characterized as incremental, evolutionary change which is associated with improvement and adjustments made within a system. As indicated by Harvey and Broyles (2010), transactional changes are usually adaptive in nature; they imply changes in some general features or aspects so that the fundamental nature of the organization is not changed. In a similar vein, Burke (2014) contends that transactional change consists of modifications in existing system characteristics, e.g., eliminating an administrative layer in the organizational hierarchy, rather than radical organizational change.

Compared to transformation, transactional change is continuous in nature. As such, this kind of change is inherent to initiatives launched for continuous improvement. Of note, Orlikowski (1996), as well as Weick and Quinn (1999), use the term 'continuous change' instead of evolutionary change. However, Burke (2014) points out that the meaning of these terms is essentially the same (Burke, 2014). To Weick and Quinn (1999), continuous change is rooted in ongoing, evolving and cumulative changes that are related and grouped across the organization. Further, Weick and Quinn (1999) point to the cumulative effect of continuous change as its distinguishing qualitative characteristic. Thus, small continuous adjustments, made simultaneously in different units, can cumulate and result in substantial organizational change (Weick & Quinn, 1999). This perspective is broadly consistent with the view of Harvey and Broyles (2010) that transformational change can be best achieved through a series of transactional, adaptive changes guided by an organization's vision for change.

It is noteworthy that for Burke and Litwin (1992), transformational change is associated more with leadership, whereas transactional change is more a concern of managers (Burke & Litwin, 1992). Although there is an overlap between the two, the former is about vision, change, influence, persuasion, providing opportunities for learning; the latter is about the role, task accomplishments, and setting objectives (Burke, 2014). At this juncture, it is essential to add that there are significantly fewer studies on management including higher education as compared to the literature on leadership (Toma, 2010). In the same vein, Kezar (2001) notes that some gaps in the knowledge of change have been hidden "because change has mostly been studied at the overall institutional level through leaders or in relation to leaders' needs…" (Kezar, 2001: 125). Overall, the literature review suggests the importance to enhance scholarly knowledge on managerial tactics used to advance transactional change processes within an HEI.

To summarize the above: by addressing the nature or magnitude of change in organizations, the core consideration is the distinction between transformational and transactional change. The former refers to a fundamental change of a system and displays a discontinuous character. The latter is continuous and evolving, typically aimed at improving aspects of the organization that will lead to better performance (Burke, 2014). Overall, as Burke (2014) observes, organization change can be "either discontinuous (revolutionary, or transformational) or continuous (evolutionary, or transactional). This kind of distinction can be useful in helping understand and diagnose the nature of required organizational change" (Burke, 2014: 167). In essence, though, transformation and evolution are not incompatible but complementary strategies; what strategy is more useful depends on a particular situation (Dunphy & Stace, 1993).

2.3.2 How change happens

There are different approaches to characterizing how change occurs in organizations. However, the most commonly used distinction is between planned and emergent change (Bamford & Forrester, 2003; Burnes, 2004a; By, 2005).

Planned change. The literature review indicates that this approach to change is rooted in the works by Kurt Lewin. Planned change, developed by Lewin, comprises four elements: Field Theory, Group Dynamics, Action Research and the Three-Step model (Burnes, 2009). Often considered separate themes, Burnes (2009) points out that Lewin viewed these elements as an integral whole. To Lewin (1951), planned change implies movement from one state to another in a structured, cyclical, step-by-step process. Thus, the Lewin's change management model assumes three planned steps, i.e. *unfreezing-moving-refreezing* (Lewin, 1959). Under this model, it is necessary to discard old behaviour first before new behaviour can be successfully adopted (Bamford & Forrester, 2003). Over time, Lewin's work was expanded and developed (Armenakis & Bedeian, 1999; Burnes, 2009). For example, Lipppitt, Watson, and Wesley (1958) created a seven-phase model of planned change; Bullock and Batten (1985) identified four phases of planned change; Cummings and Huse (1989) developed an eight-phase model of planned change. On the whole, common to this body of research is the contention that "the concept of planned change implies that an organization exists in different states in different times and that planned movement can occur from one state to another" (Cummings & Huse, 1989: 51). For that reason, Burnes (2009) indicates that planned change

cannot be understood by focusing entirely on the processes that bring about change; it is crucial to grasp the states that organizations must pass through before reaching the desired outcome.

It should be noted that planned change is associated with the organization development (OD) approach (Dawson, 1994; Burnes, 2009). Remarkably, there are a lot of different forms and models of OD resulting in numerous and various definitions (Egan, 2002). Furthermore, the original formulation of OD (the 1950s onward) differs significantly from the new(er) OD approaches, i.e., from the 1980s onwards (Marshak & Grant, 2008). At the most general level, however, common characteristics of the classic OD are captured by Beckhard (1969) as follows: OD is a planned, organization-wide approach to change managed from the top to improve performance while using behavioural science knowledge and techniques. The planned approach to change will be addressed further in this study when discussing recent trends and developments in understanding organization change (see section 2.6). At this stage, it is essential to reinforce the point that planned change presupposes a phased, structured approach mainly driven by top management.

Emergent change. From this approach, organization change is seen as an interactive, continuous, and open-ended process of adaptation to changing environments (By, 2005). As Bouckenooghe (2009) put it, emergent or continuous change "is used to group together organizational changes that tend to be ongoing, evolving and cumulative" (Bouckenooghe, 2009: 6). The proponents of this approach argue that in today's turbulent, complex, and fast-changing world, the character of organization change is unpredictable. Furthermore, constant changes in the environment necessitate efficient responses within organizations. "It is a response that should promote extensive and in-depth understanding of strategy, structure, systems, people, style and culture, and how these can function either as sources of inertia that can block change, or alternatively, as levers to encourage an effective change process" (Burnes, 1996: 14). Furthermore, change is a process of learning, i.e., not just a method of changing practices (e.g., Dunphy & Stace, 1993; Davidson & De Marco, 1999). Under this vision, organizations are open learning systems where strategy development and change are premised upon the information about the environment being acquired by the whole organization and processed on an ongoing basis (By, 2005; Dunphy & Stace, 1993). Overall, organization change is seen as a dynamic process which is highly influenced by the interaction of multiple variables within an organization (e.g., Wilson, 1992; Dawson, 1994).

In light of the above, the emergent change model advocates a bottom-up rather than top-down approach to implementing change (e.g., Bamford & Forrester, 2003: Macredie, Sandom & Paul, 1998). It is argued that the scope of change is so complex, and the pace of change is so rapid that it is hardly possible for senior management to effectuate organization change by acting alone (Kanter, Stein & Jick, 1992; Bamford & Forrester, 2003). Consequently, responsibility for change needs to be more devolved (Wilson, 1992; Burnes, 1996), and the role of senior management should shift from controller to facilitator (Bamford & Forrester, 2003). From this perspective, the content of change is not the starting point as the planned approach assumes; instead, it is the outcome of the emergent change process which takes shape through the participation of employees (Van der Voet, Kuipers & Groeneveld, 2016). Within this view, it is the inner dynamics that gives impetus for change in organizations (Kondakci, Van den Broeck & Devos, 2006). Accordingly, facilitating change is more important than planning steps for change (By, 2005).

The literature review indicates that there is little research on the emergent change as compared to planned change approaches, including HE settings. Accordingly, Kezar (2001) encourages more work in this domain by emphasizing the need to better capture emergent change processes in departments, divisions, and programmes within an HEI (Kezar, 2001: 126). On a general level, it is noteworthy that although some authors refer to the dichotomous nature of the change management approaches discussed above, other researchers take the view that successful change is premised upon a combination of planned and emergent initiatives. As Burnes (2004) remarks, "planned and emergent changes are not competitors, with each one seeking to show that it is better than the other. Nor they are mutually exclusive or incapable of being used in combination" (Burnes, 2004a: 899).

The next section continues this discussion by reviewing the literature on levels of organization change.

2.4 Levels of organization change

Organization-level change results from changing individuals and groups (e.g., Burke, 2014; Katz & Kahn, 1978; Whelan-Berry, Gordon & Hinings, 2003). In fact, "major organization change cannot occur without specific groups and individuals changing, that is, without teams and individual employees adopting different work routines or processes and different models,

frameworks, or values to guide their actions" (Whelan-Berry, Gordon & Hinings, 2003: 187). In this process, the focus for change and the approach to change differ at the individual, group, and organization level (Burke, 2014; Caldwell, Herold & Fedor, 2004). In what follows, the study takes a broad look at the literature in this subject area to get a broader perspective on change across the levels of analysis mentioned above.

2.4.1 Individual level

Nielsen, Saccoman, and Nycodym (1995) suggest a useful analogy to think of organizations as being like individuals:

> Organizations are, like individuals, also part body and part spirit. The body of an organization is its "corpus" and the spirit of an organization is its "artificial system". The corpus consists of individuals with common goals and backgrounds, and the artificial system is made up of their ideas, assumptions, beliefs, and values … Changing the corpus entails hiring, firing, and rearranging. Changing the artificial system requires a shifting of ideas, assumptions, values and beliefs – a relatively long-term proposition that requires effort, risk, and anguish (Nielsen, Saccoman & Nycodym, 1995: 35).

In line with the above, organization change is often explored through the lens of *individual-level change facilitating activities* (Burke, 2014); *the role of individuals in a change process* (Kanter, 1983; Nielsen, Saccoman & Nycodym, 1995); and *individuals' attitudes toward change* (Bouckenooghe, 2009). Each of these perspectives is briefly elaborated upon below.

Pertaining to the first perspective, Burke (2014) groups *individual-level change facilitating activities* into the following categories: recruitment, selection, replacement, and displacement; training and development; coaching or counselling. The first category of individual change is concerned with 'hiring and rearranging' when it is necessary for advancing larger change endeavours (Burke, 2014). The next tactic for fostering individual-level change relates to creating and implementing relevant training programs for employees, particularly, for people in managerial positions. Finally, coaching/counselling can essentially enhance organization change through the facilitation of individual development including leadership coaching. In terms of executive coaching, Witherspoon and White highlight four coaching roles: coaching for skills (focused on specific skills and competencies required to conduct an executive's

current project or task); coaching for performance (focused on an executive's effectiveness in a current job); coaching for development (focused on an executive's future job or responsibilities); and coaching for the executive's agenda (focused on the larger agenda of the executive including better business results in the broadest sense) (Witherspoon & White, 1997; 1998). Overall, the individual-level change facilitating activities can significantly foster organization change, whereby the essential issue is to bring into accord individual objectives for development with organization change goals (Burke, 2014). As Laloux (2014) notes, "when the individual and organizational purpose enter into resonance and reinforce each other, extraordinary things can happen" (Laloux, 2014: 219).

By discussing *the role of individuals in a change process* research prominently features change agents, i.e., people who are in charge of directing and facilitating organization change (Burnes, 2009). Change agents who have various positions within an organization often perform a variety of roles in the process of managing and facilitating change (Lunenburg, 2010; Van Poeck, Lassøe & Block, 2017). Furthermore, the role of a change agent differs significantly under planned and emergent approaches to organization change (Weick & Quinn, 1999). There are multiple participants in the emergent change process along with a change agent. As is often the case, goals, and interests of all involved impact on the emergent change and thereby make this process less rational and controlled as is assumed within the planned change model. For all these reasons, the success of the emergent change efforts largely depends on the ability of a change agent to frame the change process, both conceptually and operationally. As Weick and Quinn (1999) note, "when change is continuous, the problem is not one of unfreezing. The problem is one of redirecting what is already underway" (Weick & Quinn, 1999: 379). Importantly, by discussing the role of change agents, recent research is shifting the focus from a change agent to internal change agency, i.e., multiple actors who perform different roles in shaping and directing the change process (Doyle, Claydon & Buchanan, 2000; Buchanan & Boddy, 1992; Caldwell, 2003). The multifaceted roles and respective change agency models are addressed at a later point in this study. Now, it is essential to underscore the point that change agents radically impact on the change process, particularly, on shaping individuals' attitudes toward change.

Despite extensive research on *individuals' attitudes toward change*, this field of study is characterized by the lack of strong theorizing and resultant conceptual ambiguity (Bouckenooghe, 2010). Thus, Bouckenooghe (2010) points out that meanings and definitions

of attitudinal constructs such as readiness for change, resistance to change, cynicism about organizational change, commitment to change, openness to change, acceptance of change, coping with change and adjustment to change are used interchangeably (Bouckenooghe, 2010). Apart from that, attitude toward change (positive or negative) is generally posited as a multidimensional concept which comprises cognitive, affective, and behavioural dimensions (Elizur & Guttman, 1976; Piderit, 2000; Oreg, 2006; Smollan, 2006; Bouckenooghe, 2010). Accordingly, the research into people's responses to change distinguishes between cognitive reactions (what change participants think), affective responses (how change participants feel), and behavioural reactions (what change participants do in response to change) (Oreg, Vakola & Armenakis, 2011; Van der Voet, Kuipers & Groenevald, 2016). Furthermore, studies have shown that individuals' attitudes toward change are affected by both personal factors, e.g., need for achievement (Miller, Johnson, & Grau, 1994), locus of control (Lau & Woodman, 1995) and context factors (Klein & Kozlowski, 2000; Oreg, 2006; Herold, Fedor, & Caldwell, 2007; Ford, Ford & D'Amelio, 2008). With regards to the context factors, Oreg (2006) differentiates between change outcome, such as job security, intrinsic rewards, power, and prestige; and change process, such as trust in management, information, and social influence (Oreg, 2006). Overall, Herold, Fedor, and Caldwell (2007) argue that there is a need to develop a better grasp of "the complexities of reactions to a particular change effort. Such reactions are a function not only what is done and how it is done but also of the context in which it is done and the interaction of individuals' characteristics within that context" (Herold, Fedor & Caldwell, 2007: 950).

2.4.2 Group level

Workgroups play an important role in organizational effectiveness and change (e.g., Katz & Kahn, 1978; Burke, 2014). A changing group or a work unit may impact in a significant way on the rest of the organization (Whelan-Berry, Gordon & Hinings, 2003). Furthermore, groups can trigger change at the individual level by fostering learning and an ongoing commitment to what has been learned; additionally, groups can exert pressure on the rest of the organization to accept change (Katz & Kahn, 1978; Zaltman, Kotler & Kaufman, 1972). There is extensive research on various aspects of group (and intergroup) activities as well as on the focus of change to foster group effectiveness (e.g., Feldman, 1984; Okhuysen, 2001; Whelan-Berry, Gordon & Hinings, 2003; Burke, 2014; Laloux, 2014). For this study, three themes are especially relevant: *teamwork and team building* (e.g., Dyer, 1987; Burke, 1995;

Burke, 2014); *self-directed or self-managed groups* (Burke, 1995; 2011; 2014); and *change teams* (e.g., Lewin, 1959; Caldwell, 2003).

Teamwork and team building are vital for organizational effectiveness, particularly for sustaining significant or extensive change efforts. Accordingly, there is a rich literature that gives relevant advice on team building and related issues (e.g., Dyer, 1987). However, empirical evidence suggests that teamwork has proved difficult to achieve (Burke, 1995). Therefore, contemporary research underscores the need for more knowledge and understanding in several focal areas, e.g., what elements comprise a high-performing team, how to attain a significant personal commitment among members of a team, what conditions are essential for achieving team synergy (Burke, 1995). Overall, efficient workgroups and high-performing teams significantly impact on the success of a change process, particularly in flatter organizational structures (i.e., the matrix design and networks) that feature less hierarchical control and therefore, require intensified group activities (Burke, 2014).

The creation of flatter and more dynamic organizations results in a growing emphasis on *self-directed or self-managed groups* (Caldwell, 2003). Following Hackman (1992), the specific features underpinning the behaviours of self-directed groups include taking personal responsibility for actions, managing own performance and seeking guidance when needed. Furthermore, Hackman (1992) delineates conditions that foster self-direction while contributing to both personal satisfaction and group achievements: clear and appealing goals, a supportive structure for the unit, consultation, and coaching, among others (Hackman, 1992). Notably, modern research indicates the success of self-directed groups provided that the organizational environment creates appropriate conditions for their functioning. For example, Laloux (2014) presented evidence on the emergence of a new organizational model which he calls ‘Teal Organization.’ The author addresses in detail organizational structure, systems, processes, practices, and the less visible but influential aspect, i.e., organizational culture. Taken together, these factors create relevant conditions for self-managed teams and even make self-managing organizations possible (Laloux, 2014). Overall, self-managed groups are seen as mechanisms by which to enhance horizontal coordination across units and departments, thereby facilitating organizational flexibility to change.

Along with self-managed groups, organizational analysts spotlight the emergence of *change teams*. To explain this trend, Caldwell (2003) highlights several factors that are in line with

the propositions outlined above: (a) central hierarchical control during change management interventions is becoming less strong which leads to growth of self-managed teams as a means by which to advance horizontal coordination across units and work processes; (b) team coordination at various levels becomes important because change in one area can significantly influence other areas; (c) large-scale organization change is too complex and high-risk, making it hardly possible for one individual to take the lead even if there is a strong sense of vision and direction (Kotter, 1996); (d) there is a growing disillusion with the exaggerated emphasis on the vital role of charismatic leadership in strategic change processes; (e) the advantages of combining inside knowledge with internal and external expertise of consultant teams have been recognized as being useful for enhancing the effectiveness of implementation (Lacey, 1995); (f) it is increasingly acknowledged that change teams as units of learning, counter resistance and institutionalize behavioural change more deeply (Caldwell, 2003: 138). In effect, change teams can function at strategic and operational levels and substantially contribute to instigating organization-level change.

2.4.3 Organization level

The cornerstone of thinking about change at this level of analysis is to view organizations as open systems (e.g., Katz & Kahn, 1978; Cummings & Worley, 2009). Social organizations are open due to continuous interaction with elements or parts of the external environment which fundamentally impact their operations (Katz & Kahn, 1978; Burke, 2014). While being open to external influences, organizations are entities that comprise the social component (or people); physical and technological parts (e.g., buildings); task- or work-related elements (e.g., job roles) or functions (e.g., manufacturing); and subsystems, i.e., departments, business units, etc. (Burke, 2014). Overall, thinking about organizations as open systems implies the recognition of relationships between the external environment and parts or elements of an organization while being cognizant that a single autonomous element behaves differently when it interacts with other elements (Mele, Pels & Polese, 2010). Given this, academics and practitioners emphasize the need to take a whole system perspective on an organization and advocate systems thinking in addressing organizational change.

Notably, the systems thinking perspective popularized by Peter Senge in his seminal work "The Fifth Discipline" (1990) has significantly influenced organizational theory and practice, including in higher education. For example, Toma (2010) made a strong case for introducing systems thinking in university strategic management as a powerful lever for building

organizational capacity (Toma, 2010). In general terms, systems thinking is a mental model or a way of thinking about an organization as a system where all components are interrelated and should be considered in the relationship. Further, thinking systematically means to be aware that relationships are not always linear. Thus, although many relations imply causality, complex relations imply circular chains of causality (Senge, 1990). Overall, the focus is on the understanding of how patterns and relations influence each other. Reynolds and Holwell (2010) note in this respect that "by focusing on relationships you discover how something works by its effects on what surrounds it" (Reynolds & Holwell, 2010: 8). Therefore, studies of change including higher education settings, highlight the importance of addressing an organization-as-system where all parts interrelate and form an environment that can foster or constrain implementation efforts.

The next section offers an overview of the literature on content, process, and context of organizational change.

2.5 Content, process, and context of change

There have been multiple studies looking at the distinction between content, process, and context of organizational change. Although the research exploring all the three factors simultaneously is scarce (Armenakis & Bedeian, 1999), it is widely recognized that the content-process-context distinction is fundamental for understanding organization change (e.g., Pettigrew, 1987; 1990; Devos & Buelens, 2003).

As indicated in various sources of the research literature, the content, or *what to change*, refers to the type or the substance of the change in an organization (Burnes, 2014; Armenakis & Bedian, 1999; Pettigrew, 1987; Barnett & Carroll, 1995; Devos & Buelens, 2003). From a scholarly perspective, content is about vision and direction for change, thereby relating to purpose, mission, values, that is, "what the organization is all about – or should be about" (Burke, 2014: 23). Notably, the organizational change literature offers various content models that emphasize the scale or magnitude of a change initiative (e.g., Burke & Litwin, 1992; Vollman, 1996). Thus, Burke (2014) underscores the importance of considering the content of change through the prism of the distinction between discontinuous and continuous change processes. If change is discontinuous, its content concerns mostly transformational factors, e.g., mission, purpose, or strategy. If change is continuous, the content of change addresses day-to-day operations and concentrates on transactional factors, e.g., products, services, or

organizational structure (Burke, 2014). Overall, the content of change is largely determined by the modifications in the external environment of an organization (Burke, 2014). Large scale change in the environment will lead to dramatic organizational changes (March, 1981).

The process, *or how to change*, deals with the implementation, i.e., how change occurs in organizations. From this viewpoint, Van de Ven and Poole (1995) address the process of change through four theoretical lenses, i.e., life-cycle, teleological, dialectical, and evolutionary. Kezar (2001) expands the typology mentioned above with two additional categories of theories of change, i.e., social cognition and culture. Accordingly, Kezar (2001) suggests six major typologies that help develop insights into a change process: (1) evolutionary theories emphasizing the interaction between internal and external environments; (2) teleological theories or planned change models placing emphasis on the importance of key individuals (e.g., leaders, change agents); these theories consider the change process as rational and linear as evolutionary models do; (3) life cycle theories conceptualizing change as a natural part of human or organizational development; (4) dialectical or political theories characterizing change as a result of conflicting ideologies or belief systems; (5) social-cognition models linking change to learning and mental processes such as sensemaking; and (6) cultural models assuming that change occurs as a response to modifications in the human environment and presupposes alterations of values, beliefs, history and traditions (Kezar, 2001). Overall, Kezar (2001) suggests combining insights of various change theories to understand and approach change. At the same time, Kezar (2001) argues that organizational change can be best explained through political, social-cognition, and cultural model, particularly in a higher education setting (Kezar, 2001).

The context, *or why to change*, relates to the conditions shaping the organizational environment. Capelli and Sherer (1991) define context as "the surroundings associated with phenomena which help to illuminate that phenomena, typically factors associated with units of analysis above those expressly under investigation" (Capelli & Sherer, 1991: 56).

The research literature differentiates between external and internal contexts that affect an organization's performance and change (e.g., Armenakis & Bedeian, 1999; Pettigrew, 1987). The external context designates social, economic, political, and competitive environment (Pettigrew, 1987) including government regulations, the advancement of technology, and forces shaping competition in the marketplace (Armenakis & Bedeian, 1999). The internal

context is determined by various "system elements" which can be grouped into four broad categories: the organizing arrangements of a system (e.g., organizational structure, policies and procedures, formal goals and strategies); social factors (e.g., organizational culture; informal networks of communication; decision-making; interpersonal, group, and intergroup interaction processes; individual attitudes and beliefs), technology (e.g., traditional tools and equipment as well as job design, workflow design and the technical expertise of employees); and physical setting (i.e., the configuration of the workspace and the location of work areas) (Porras & Hoffer, 1986: 479). As far as universities are concerned, it is important to emphasize that in an HE setting "context is related to the culture and the history that have unfolded within the academic institution. It shapes and configures the norms, values, and attitudes…" (Debackere, 2000: 323). Overall, the context exerts significant influence, both exogenous and endogenous, on organizational change efforts. In effect, organizational context creates the antecedent conditions for change (Pettigrew, 1987) that can either constrain or encourage change behaviour and attitudes (Johns, 2001). Furthermore, the context can provide a significant impact on both, the content and process of change (Pichault, 2007). Therefore, it is essential to address content and process of change in the framework of interconnections and interactions between the external and internal environment where a change effort occurs.

It is noteworthy that much of the research literature focuses on the role of the external environment in affecting change in organizations. However, "very little work has been done to investigate the influence of the internal change environment on individual change participants' responses to specific change initiatives" (Herold, Fedor & Caldwell, 2007: 944). Further, the literature review indicates the need for advancing scholarly knowledge of how the synergetic relationship among the internal contextual elements such as structure, policy frameworks, management practices, and climate, impact on the creation of a change-enabling environment, particularly in universities as organizations.

In summary, the literature review so far has centred on the key factors that underpin organizational change dynamics, i.e., change types; change levels; content, process, and context of change. To gain further insights into the specifics of intra-organizational change processes, the next section reviews the literature on trends and issues in understanding organizational change.

2.6 Trends and issues in understanding organization change

The contemporary research on organizational change shows significant shifts in emphasis, patterns, and underlying concepts of the change mainly set off by the Information Age (e.g., Duderstadt, 2000; Ehlers & Schneckenberg, 2010; Blake, 2016). In this framework, research and practice emphasize the importance of viewing organizational development and change from a systems perspective with a focus on complex relationships and mutual influence of various dimensions that shape organization-as-system (e.g., By, 2005; Bui & Baruch, 2010; Oterkiil & Ertesvåg, 2012). Against this background, a substantial body of literature refers to the Burke-Litwin Model of Organizational Performance and Change (Burke & Litwin, 1992) that spotlights crucial factors that affect organizational change processes. The specifics of the Burke-Litwin model which is used in this study as a heuristic tool for understanding the transactional change in higher education (HE) will be detailed below in this chapter. Here, it is essential to underscore the point that various streams of organization research frequently refer to the Burke-Litwin Model in attempting to grasp interconnections and the complexity of relationships among the main determinants of change as well as their impact on non-linear patterns of organizational behaviour, particularly in HE settings.

Further, much attention is paid to organizational discourse as an essential way of thinking about the change in organizations. For example, in several works exploring the impact of language on organizational change concepts, Marshak provides both scholarly and practitioner perspectives on the crucial role of language in shaping organizational mindsets and change processes (e.g., Marshak, 2002; Marshak, 2005; Marshak & Heracleos, 2005; Marshak & Grant, 2008). By exploring the role of discourse in organizational dynamics, Marshak draws on a set of ideas of the philosophy of language, i.e., Austin's speech act theory and Searle's notion of an 'indirect speech act'. For Austin (1962) speech is a form of action, so that "to *say* something is to *do* something" (Austin, 1962:12). Searle (1975) introduces the notion of an 'indirect speech act' where the connection between the intended meaning and the utterance is not clear and direct and thereby, extends Austin's speech act theory (Searle, 1975). Overall, the speech act theory provided the basis for grasping discourse as action at the level of single utterances.

Based on the above observations, Marshak takes the move to the next level and explores the interrelation between discourse and action in an organizational context. He brings a well-supported argument that conceptual language of organizational change is of crucial

importance in embracing the current and emerging change dynamics of modern institutions. Although the linguistic perspective on this issue is outside the scope of this study, Marshak's insights have specific relevance for enhancing the understanding of intra-organizational change dynamics, particularly in an HE setting. In what follows, Marshak's framework is used to illustrate how new contexts for change and altered assumptions about the pattern of change spur a shift in attitudes toward change in organizations.

2.6.1 Shift in organizational change emphasis

A shift in the basic premise underlying the approach to organizational change dates back to the early 1980s. In the new contexts, i.e. the oil crisis in the 1970s combined with the economic recession of the West and rapid economic growth of Japan, organizations were compelled to rethink the way they approach change (Burnes, 2009). Lewin's Planned approach to organizational change that impacted on theory and practice for 40 years came under criticism for being too linear and mechanistic in nature. The newer perspectives, particularly the Culture-Excellence school, the postmodernists, and the processualists, questioned the notion of change as an ordered and linear process (Burnes, 2004b). The newer conceptions emphasized the need "to explore how organizations continuously change and thereby extend thinking beyond the traditional punctuated equilibrium view, in which change is primarily seen as rare, risky, and episodic, to one in which change is frequent, relentless, and even endemic to the firm" (Brown & Eisenhardt, 1997: 2). Overall, these conceptions spurred research on organizational change as an interactive, continuous process and emphasized the relevance of a whole-system perspective on change in the unstable, rapidly changing contexts.

The Information Age provides further impetus for organizations to shift attention to the continuous, whole-system change. The unlimited possibility to access and to exchange information rapidly, anywhere and anytime, resulted in the emergence of new contexts where success factors differed from those of the Industrial Age. For example, stability, independence, and autonomy were among some of the critical success principles in the Industrial Age. However, in the Information Age, crucial success factors include innovation, speed, flexibility, networking, and collaboration.

In this setting, ongoing change becomes the new imperative for most organizations and poses significant challenges for traditional change practice. Thus, traditional organizational change

practices entail *periodic operational adjustments*, i.e. occasional changes to parts or segments of an institution (the prevailing approach to institutional change in the past); *continuous operational adjustments*, i.e., changes to parts or segments on ongoing basis; or *periodic systemic re-arrangements*, i.e., changes to organizational patterns on the episodic basis. However, in today's fast-changing environment, organizations are increasingly facing the need to introduce *continuous systemic alignments*, i.e., ongoing, virtually simultaneous changes to the whole organization (Marshak, 2002). Therefore, in light of the current shift in change emphasis, organization studies highlight the need to think anew and look for a completely different way of addressing and conceptualizing organization change.

2.6.2 Changing views on the pattern of change in organizations

Implicit in the discussion on the new organizational change emphasis is the need to reconsider the underlying concepts of what constitutes organizational change and how it can be achieved. The prevailing assumption on which the pattern of organizational change is traditionally predicated is rooted in the ideas of Plato and Aristotle, who equated change with motion. Association of change with movement is also related to the Newtonian worldview that shaped organizational mindsets in the Industrial Age. As noted by Bell (2002), the Newtonian paradigm "presents the environment as a place of order, simplicity, and conformity, where everything operates according to specific, knowable and predetermined rules. The world is perceived as an orderly place where the whole is equal to but no greater than, the sum of its parts. This, in turn, means that all activities are predictable and controllable" (Bell, 2002: 417).

In line with the above, the traditional discussions of organizational change implicitly invoke concepts and terminology related to causality, forced movement, inertia, and resistance. However, a conceptual language rooted in the mechanistic worldview might significantly constrain organizational capability to capture specifics of continuous, whole system change. As a result, a fundamental shift in conceptual assumptions about the nature of change is emerging, i.e., from 'mechanistic and planned movement concepts' to conceptualizing organizational change dynamics as social agreement, complex adaptive system or a psychological process that implies a fundamental change in consciousness. In line with this, new organizational change patterns and embodied practices emerged, including appreciative inquiry, large group interventions to achieve mutual understanding, changing mindsets to bring about transformational change as well as change models (e.g., complex adaptive

systems theory) that essentially differ from the classical 'unfreeze-move-refreeze' linear change approach (Marshak & Grant, 2008). To illuminate the new organizational change patterns and related practices, some examples are given below.

The acknowledged approach in contemporary organizational change practice focuses on large group interventions with the aim to search for common ground and social agreement as a means for implementing change. The proponents of this approach have developed a methodology for working with whole systems that have proved to be more effective at achieving change as compared to the top-down approach. As Laloux (2014) notes:

> These large group techniques can energize organizations in a way that top-down strategies cannot. Something extraordinary happens when a vision emerges collectively, with everybody in the room. People make a personal, emotional connection with the image of the future that emerges. And they take charge of implementing the vision: project teams emerge on the spot, based on people's interests, skills, and talents. Strategy is no longer the domain of a few minds at the top, and implementation is no longer a mandate given to a few program managers. A whole organization is mobilized to sense into the future and help the future unfold (Laloux, 2014: 205).

One of the widely practised large-group approaches to organizational change is appreciative inquiry (AI). AI is a theory of change in human systems and a method for organizational development (Cooperrider & Srivastva, 1987; Bushe, 1995). The AI approach is premised upon the positive, appreciation of an organization's strengths, and search for inspiration in the existing good practices. "The emphasis is on the assumption of responsibility and ownership, as well as on engagement in dialogue and collaboration" (Gosselink & Pollefeyt, 2014: 5). It is noteworthy that appreciative inquiry is strongly influenced by theories of discourse (e.g., Barrett, Thomas & Hocevar, 1995; Marshak & Grant, 2008). Furthermore, appreciative inquiry not only focuses on the best of what is, but also engages all stakeholders in the process of re-imaging what could be and taking ownership of what will be. This "fusion of strengths" and "activation energy" is generally considered essential to the generative momentum of the change process (Bushe, 2011: 98). Appreciative inquiry therefore underscores the socio-cultural aspects of change. The core point is to create a shared sense of purpose and reach social agreements that are necessary to make change happen.

In essence, the perspective on the organizational change as a social process is in line with Rogers' (2003) view on the diffusion of innovations, who highlighted and explored the social nature of diffusion as a particular type of communication concerned with the transmission of messages that are seen within the social systems as new ideas. For Rogers (2003), "diffusion is a kind of social change, defined as the process by which alteration occurs in the structure and function of a social system. When new ideas are invented, diffused, and adopted or rejected, leading to certain consequences, social change occurs" (Rogers, 2003: 6). Overall, the social interaction alters the process of organizational change while moving it from a linear, technical process that operates at the organization level to a continuous, social process that works at the individual levels.

In an attempt to understand and describe the holistic, continuous nature of organizational change dynamics, academics and practitioners frequently refer to the imagery and concept of complex adaptive systems. The concept of complex adaptive systems offered by complexity science questions traditional assumptions of stability and episodic change in organizations that must be planned, managed and controlled (e.g., Olson & Eoyang, 2001; Dent, 2003; Shaw, 1997; Stacey, 1996). Instead, the underlying assumption is that organizational change is a continuous, non-linear process and that organizations like complex systems in nature can be self-organizing. As Brown and Eisenhardt (1997) indicate:

> Like organizations, complex systems have large numbers of independent yet interacting actors. Rather, than ever reaching a stable equilibrium, the most adaptive of these complex systems… keep changing continuously by remaining at the poetically termed 'edge of chaos' that exists between order and disorder…These systems, which stay constantly poised between order and disorder, exhibit the most prolific, complex, and continuous change… (Brown and Eisenhardt, 1997: 29).

In a similar vein, Svyantek and Brown (2000) suggest that organizations exhibit nonlinear behaviour and advocate a "complex-systems approach" to study organizations. They argue that "explaining the behaviour of a complex system requires understanding (a) the variables determining the system's behaviour, (b) the patterns of interconnections among these variables, and (c) the fact that these patterns and the strengths associated with each interconnection, may vary depending on the time scale relevant for the behaviour being

studied (Svyantek & Brown, 2000: 69). Overall, the image of complex adaptive systems and the "complex-systems approach" to study organizations can substantially facilitate inversion of thinking and talking about change, namely, from mechanistic, planned movement concepts of introducing and fixing change to the conceptual language of enabling, sustaining, and cultivating change within an organization-as-system.

Another common, although different, attempt to avoid a mechanistic approach to change associates organizational change with altered consciousness. This approach provides another set of concepts and images to embrace contemporary change dynamics in organizations. To quote Marshak (2002):

> Consider that with movement metaphors change occurs in physical space, 'despite resistance, the organization moved from a national to a global strategy'. This invokes images and ideas of inertia, forces, resistance, end-states, paths, and so on. This is the language of planning, managing and engineering change. Unlike physical movement, however, altered consciousness occurs in psychological space and evokes a different set of metaphors and images. Frequently, the imagery is not about going somewhere, but about …seeing more clearly, it is about … transformation of consciousness (Marshak, 2002: 284).

Some authors highlight the need for a "new way of seeing" or a fundamental change in institutional consciousness to release a cycle of continuous change for improvement. This approach is particularly characteristic of transformational change theory. Notably, transformational change proponents strongly suggest being mindful of a conceptual language of change that can impede or foster the psychological process of reaching consensus among coworkers.

In summary, by exploring the origin of organizational change and how it can be achieved, the focus is shifting from the 'negatives' (i.e., fixing problems) to the 'positives' (i.e. organizational strengths). Furthermore, scholarly literature conceptualizes organization change as social agreement and underscores the impact of language and meaning-making on change processes (Marshak & Grant, 2008). This perspective links the organizational change practices to the emerging field of organizational discourse that highlights the role of language in organizational dynamics (Grant, Keenoy & Oswick, 2001; Oswick *et al.*, 2005). Overall,

these approaches explicate organizational change as a psychological process rooted in the patterns of relationships and advocate a systemic and engagement-oriented approach to organizational change.

The next section considers the shifting paradigms that affect the organizational capacity to achieve change.

2.6.3 Shifting paradigms in understanding organizational capacity

The literature review indicates that there is a significant shift in an understanding of what constitutes organizational capacity. Thus, modern research and practice increasingly advocate systems thinking in addressing organizational capacity and in this framework, highlight the importance of intangibles, e.g., knowledge, beliefs, and attitudes. The proponents of this approach call for treating capacity - defined here as "the administrative foundation of an institution, which is essential for establishing and sustaining initiatives intended to realize its vision" (Toma, 2010: 3) - as a system. As indicated in a five-year research project conducted by the European Centre for Development Policy Management (ECDPM), it is hardly possible to understand the essence of capacity by reductionism and fragmentation (Morgan, 2005). Capacity emerges because of the interrelationships and interactions among the various elements within a system of which it is a part. "Capacity as a system interrelates with other systems inside the larger organism – systems of processes, of structure, of meaning, of power, of information and knowledge" (Morgan, 2005: 18). Accordingly, capacity development is not a technical process of transferring knowledge or skills. Rather, capacity is shaped by a complex interaction of tangible and intangible elements; and what is more, organization energy is as important as skills and resources are (Morgan, 2005).

The perspective mentioned above is broadly consistent with the proposition of Kaplan (2000), an international development practitioner and NGO scholar, who argues that tangible and intangible elements that comprise organizations as open systems form a hierarchy of importance where some elements are more central than others in dealing with organizational capacity. The author highlights six of the elements in a hierarchy of importance, although it is not always the case that these elements should be approached in that sequential order (Kaplan, 2000):

- *A conceptual framework* as a set of concepts that help organizations to keep pace conceptually with the internal and external developments;

- *Organizational 'attitude'* which provides the basis for *building confidence* to act efficiently, and *accepting responsibility* for the social and physical conditions facing the organization;
- *Vision and strategy* which can be developed when there is a clarity of understanding of the external conditions as well as a sense of confidence and responsibility;
- *Organizational structure*, i.e., clearly defined roles and functions that are the result of clarity in organizational aims and strategy;
- *Acquisition of skills***,** abilities, and competencies, i.e., the traditional focus of training programs;
- *Material resources*, i.e., finances, equipment, office space, etc.

According to Kaplan (2000), the visible elements (i.e., material and financial resources, skills, organizational structures, and systems) are not as central in the attainment of organizational capacity as the invisible ones that are placed at the top of the hierarchy. At the same time, Kaplan (2000) contends that:

> Development cannot be viewed simplistically; these phases overlap. Yet what emerges clearly from extensive experience is that there is a sequence, a hierarchy, an order. Unless organizational capacity has been developed sufficiently to harness training and the acquisition of new skills, training courses do not 'take', and skills do not adhere. The organization that does not know where it is going and why, that has a poorly developed sense of responsibility for itself, and that is inadequately structured, cannot make use of training courses and skills acquisition (Kaplan, 2000: 519).

To support his argument, Kaplan (2000) claims that incapacitated organizations usually blame the visible elements. Such organizations complain about lack of resources, lack of skills, inappropriate structures or an unfavourable context. In contrast, capacitated organizations usually demonstrate the ability to focus and reflect on the invisible elements, the fact that capacity builders do not always take into consideration. Frequently, by doing capacity-building work, donors or development practitioners often concentrate on the lower level of the hierarchy, i.e., by providing resources or training courses. These activities can be complemented by needs' assessments and audits that again focus on tangible aspects of capacity development, leaving the intangible elements underdeveloped. From this perspective, Kaplan (2000) criticizes, for example, conventional attempts to facilitate strategic

planning processes without taking account of organizational culture, conceptual framework, and other invisible elements. Such strategic planning exercises usually focus on 'material aspects' of planning, i.e., on setting goals and developing plans for action. As a result, the targeted institution has a strategic plan at hand, while remaining incapacitated as before, i.e. lacking the ability for self-reflection, innovation and continuous adjustment of the strategic plan as required. "These latter abilities are what really constitute capacity, but – at risk of repetition - they are invisible" (Kaplan, 2000: 520).

In a similar vein, Levy and Merry (1986) argue that by developing a change strategy it is essential to focus on the world view, belief system, and presuppositions underpinning operations of an organization. The authors underscore the point that this approach is guided by Kuhn's theory of scientific revolutions, mentioned earlier, as translated and applied to organizational change. According to Levy and Merry (1986):

> The implicit assumption of this change strategy is that organizations have a "world view", high-level abstract beliefs that shape and guide members' values, perceptions, attitudes, and behaviour; these beliefs also shape and guide the organization's purpose, policy, priorities, procedures, and structures. Therefore, once this world view is changed, other elements will change accordingly (Levy & Merry, 1986: 10).

Consistent with this line of thought, Laloux (2014) puts forth an important conceptual question: "could it be that our current worldview limits the way we think about organizations? Could we invent a more powerful, more thoughtful, more meaningful way to work together, if only we change our belief system?" (Laloux, 2014: 2).

To conclude, true organizational capacity is deeply rooted within the realm of the invisible. It is anchored in the institutional capability for self-understanding and ongoing learning. Further, success in organizational change depends to a great extent on a conceptual framework that underpins strategic change efforts. As Kaplan (2000) indicates:

> The first requirement for an organization with capacity, the 'prerequisite' on which all other capacity is built, is the development of a conceptual framework which reflects the organization's understanding of the world. This is a coherent frame of reference, a set of concepts which allows the organization to make sense of the world around it, to

> locate itself within the world, and to make decisions in relation to it (Kaplan, 2000: 518).

The foremost challenge is to evoke institutional commitment and ownership of the concepts, objectives, etc. by targeting social energy in an organization-as-system.

The above discussion highlights the key points as follows: (a) present-day contexts and conditions exert significant influence on the ways of conceptualizing and addressing change in organizations; (b) theory and practice of organization change increasingly advocate the effectiveness of an interactional approach with the emphasis on the widespread engagement and the activation of social energy within organization-as-system; (c) organizational (change) capacity needs to be viewed in a systemic and integrated manner with the focus on an organization's worldview and belief system.

The next section focuses on issues and challenges for implementing change within an HEI.

2.7 Change in higher education institutions

In this section, the literature review is systematized around three analytical domains that give insights into the complexity of changes facing universities as well as their essential characteristics as organizations: (a) triggers and directions for change; (b) organization structure; (c) organization culture.

2.7.1 Triggers and directions for change in higher education

Change in universities is driven by both external dynamics and internal developments (Cleveland-Innes, 2010; Brown, 2012; Stensaker, 2015). Higher education literature has long recognized that universities function as open systems being affected by societal changes and conditions (Peterson, 1997, 2007). As shifts in the external environment continue to grow, the university's internal processes and organizational arrangements are increasingly shaped by multiple and varying forces of change (Duderstadt, 2001; Bartell, 2003; Elken & Røsdal, 2017).

By exploring the major forces affecting internal university developments, research in higher education highlights the evolutionary nature of globalization, financial pressures and

constraints, the enormous growth of information, growing demand on teaching and research in knowledge-driven economy, global competition for student enrolment, changing educational needs of society and lifelong learning, profound impact of information and communication technology (ICT) on university operations (e.g., Duderstadt, 2000; Kezar & Eckel, 2003; Shields, 2013; Tierney & Lanford, 2015) as well as changing expectations of society regarding the contribution of higher education to societal welfare and economic development (Enders, 2013). These triggers for change can be grouped into four areas: financial imperatives, changing societal needs, technology drives and market forces (Duderstadt, 2000). All things considered, some scholars argue that the main impetus for change comes from the intensified global competition of HEIs and their market orientation (e.g., Newman, Couturier and Scurry, 2004; Taylor, 2006). Consequently, entrepreneurialism and commercialization have become increasingly important for universities that were historically centred on teaching, research, and service (Huisman, Boezerooij & Van der Wende, 2007; Laukkanen, 2003).

The drive towards commercialization and the competitive dynamics of the HE sector put universities under pressure to enhance their economy, efficiency and market responsiveness (Becher & Trowler, 2001). Universities are required to implement major changes to their organizational forms, policies and processes following the fundamental principle of neoliberalism, i.e., "the superiority of individualized, market-based competition over other modes of organization" (Mudge, 2008: 706-707). The neoliberal ideology, the ascendancy of 'new managerialism' and a cognate development associated with the diffusions of policies of 'new public management' impose significant changes on universities (e.g., Deem, 1998, 2001; Deem & Brehony, 2005; Bacon, 2014). These changes include commodification of knowledge, services and resources (including personnel); conceptualization of students as consumers and universities as competitive service providers; a focus on income generation and competition for funding, an emphasis on the external accountability and performativity, with associated practices such as audits, performance indicators, league tables, rankings, etc. (e.g., Evans, 2018a; Naidoo & Williams, 2015; Raaper, 2016; Olssen & Peters, 2005; Deem & Brehony, 2005; Anderson, 2008; Ylijoki, 2005; Ylijoki & Ursin, 2013). Notably, as Bleiklie (2018) indicates, the reforms have been driven not just by the external context; rather, the ideals underpinning the organization and governance of universities have changed: from the idea of the university as a "republic of scholars" where leadership and decision-making are based on collegial decisions made by independent scholars, to the university as a

"corporate enterprise" where strategic decision-making is made by leaders whose primary task is to satisfy the interests of major stakeholders and academics are among several interested parties (Bleiklie, 2018). Overall, neoliberalism has a profound impact on university operations not only through a set of economic policies but also as an ideological and cultural construct that normalized market-based thinking (Cole & Heinecke, 2018).

The new realities challenge the underlying objectives of education and foster debate on the role and purpose of universities in a changing society. From the perspective of the corporate enterprise ideal, it is argued that the entrepreneurial activity of universities is "a step in the natural evolution of a university system that emphasizes economic development in addition to the more traditional mandates of education and research" (Rothaermel, Agung & Jiang, 2007: 708). In a similar vein, Wissema (2009) points out that the current university model is outdated. To be able to survive and prosper universities need to understand and manage the transition from the science-based university model that came out after the Napoleonic period into the 'third generation university', abbreviated to 3GU (Wissema, 2009). As compared to the medieval university (first generation) and the Humboldt university (second generation), the 3GU emphasizes the commercialization of know-how. Accordingly, universities are viewed as the source of entrepreneurial activity in addition to traditional tasks of education and research. Further, 3GUs are networked, multicultural, cosmopolitan organizations which rely to a smaller extent on state regulations (Wissema, 2009).

In contrast to the views outlined above, proponents of Humboldt's ideas warn against "a growing tendency to see universities as … sources of marketable commodities for their customers, be they students, business or state" (Boulton & Lucas, 2008: 5). From this perspective, there has been a lot of resistance to neoliberalization of the academy (Anderson, 2008). It is argued that neoliberalism directs the mission or purpose of higher education towards individualistic frames (Lybeck, 2018) and forces higher education into a narrow job-training missions (Cole & Heinecke, 2018). The introduction of private-sector models and related practices cause harm to the academic community and diminish the value of the university to society. Reductions in state funding, increasing number of students who must pay for education and unparalleled students debts lead to the retreat of the university from public goods (Newfield, 2008, 2016) and subvert "the aim of education, from enlightenment to constraints" Williams, 2006: 209). Accordingly, the neoliberal university or the managerial

university with its emphasis on performativity, consumerism and a new mode of governance has attracted strong criticism in the writings on higher education.

Another stream of higher education research, Critical University Studies in particular, is adopting critical stance to the critique of neoliberalism itself. This research suggests that although the demise of the neoliberal university model is increasingly predicted, workable alternatives to neoliberal structures have not been developed yet (Evans, 2018a). Lybeck (2018), for example, highlights the importance of thinking about how to improve the current situation created by substantial deconstruction of what is taken for granted as the natural structure of higher education in a knowledge-based economy. Similarly, Cole and Heinecke (2018) maintain that "rolling back neoliberalism requires more than critique. It requires both a vision of what a post-neoliberal society would look like and some indication of how to work toward a post-neoliberal world… There is no going back but only a re-envisioning forward" (Cole & Heinecke, 2018: 2). However, as Evans (2018a, 2018b) aptly notes, it is unlikely that the marketized university will rebrand itself in the short term, also because it is not clear what the new brand will look like. Shifting from neoliberal to post-neoliberal university will likely to be a difficult and important task over years. Neoliberalism has deconstructed the old university; the major challenge for post-neoliberal university is how to deconstruct its deconstructions (Zuidhof, 2015).

The current discussions around the role of higher education in a changing environment urge universities to rethink themselves as institutions for research and learning (Ehlers & Schneckenberg, 2010; Cotterill, 2015). Through this lens, Ehlers and Schneckenberg (2010) advocate the creation of a new, all-embracing concept for universities and point out the major directions for change which include: (a) *from the perspective of students*, there is a need for competency-based learning rather than knowledge transfer as well as the demand for practice-oriented education focused on the development of relevant skills and competencies; (b) *from the perspective of faculty members,* it is essential to redefine the balance between teaching, learning, and research; faculty is expected to foster interdisciplinarity and to adopt learner-centred educational models with the focus on innovation and competence development; (c) *university administrations* are to become teaching and research support centers and play a crucial role in supporting university as a whole, including issues such as the integration of ICT in the teaching and learning process, the interaction between research and administration; (d) *university leadership* is challenged by developing and implementing the systemic,

strategic vision on how to turn higher education institutions into forward-looking learning organizations; (e) *government and civil society* are expected to find new ways of engaging universities to enhance the well-being of citizens and foster economic prosperity (Ehlers & Schneckenberg, 2010: 2-3). Importantly, by undergoing the transformation, universities will have to learn how to serve the student community in the most efficient way (Hénard & Roseveare, 2012). Overall, as Cleveland-Innes (2010) put it, "the requirement for systemic strategic effort to deconstruct and reconstruct higher education has never been more important" (Cleveland-Innes, 2010: 134).

Impetuses for change, both from outside and inside, challenge universities as organizations. In essence, universities increasingly face the challenge of reconciling the need for continuous adaptation to the external circumstances with concern for academic quality. It has become essential to consider models of internal processes which will enable universities to provide a response to the significant and rapid changes (Hurley, 1990). Developing capacity for change takes centre stage in institutions of higher education.

All of the above suggests the need to foster organizational research in higher education. However, the literature review indicates that "the study of organizational topics within higher education is in sharp decline" (Bastedo, 2012: 5). Thus, Newman, Couturier and Scurry (2004) contend that "with regard to change strategies, much of the literature focuses on the business community, with some focused on the art of bringing change to government. To be useful, it must be adapted to the world of higher education, with its emphasis on faculty involvement" (Newman, Couturier & Scurry, 2004: 200). In the same vein, Fumasoli and Stensaker (2013) point to the imbalance between the number of articles devoted to policy issues in higher education and papers exploring the university as an organization. By conducting an extensive review of organizational studies in an HE context, they identified a substantial body of articles on the impact of policy reforms on universities, and sparse studies on the university as a unit of analysis. The authors argue that by focusing organizational research in higher education on policy issues, the needs of practitioners, i.e. institutional managers and administrators, have not been sufficiently addressed. Thus, "research in higher education has somewhat neglected the complex reality of the university as an organization possessing its own structures, cultures and practices" (Fumasoli & Stensaker, 2013: 479).

In what follows, the literature review focuses on the distinctive features of universities as organizations. The emphasis is placed on organization structure and academic culture.

2.7.2 Organization structure

As indicated by Burnes (2009), "to understand why and how to change organizations, it is first necessary to understand their structures, management, and behaviour" (Burnes, 2009: 4). Following Kezar (2001), essential characteristics of universities as organizations include, among others: interdependent organization; unique culture; values-driven, multiple power and authority structures; loosely coupled system; organized anarchical decision-making; professional and administrative values; shared governance; and employee commitment (Kezar, 2001). In effect, the distinctive features of universities outlined above underpin their organization structure and fundamentally impact on change dynamics within an HEI.

It is noteworthy that organizational arrangements of universities were traditionally characterized as 'professional bureaucracies' (Mintzberg, 1979), 'organized anarchies' (Cohen, March & Olsen, 1972) and 'loosely coupled systems' (Weick, 1976). Through a professional bureaucracy lens, the university's organization paradigm is characterized by relative formalization along with decentralized decision-making and diffusion of authority among highly qualified professionals (Leitko & Szczerbacki, 1987). According to Cohen, March and Olsen (1972), HEIs are organized anarchies defined by ambiguous goals, fluid participation and nonlinear processes while being comprised of decentralized units that require limited coordination. Further, Weick (1976) conceptualized universities as loosely coupled systems in an attempt to capture the decentralized aspects of their organization (Peterson, 2007). Essentially, Weick (2001) gave significant insights into the specifics of loosely coupled systems when he highlighted general principles which should be kept in mind when attempting to change them. These principles are summarized by Burke (2011) as follows: put more focus on change as a continuous process, i.e., not an episodic one; proceed on the assumption that change will most likely happen on a small rather than large scale; undertake improvisational initiatives more than planned ones; be more accommodative than constrained; operate in a local rather than in a cosmopolitan manner (Burke, 2011).

The conceptualization of universities as 'loosely-coupled systems', 'professional bureaucracies' and 'organized anarchies' still have currency. Peterson (2007) notes in this respect that although the conceptual understandings of universities have emerged as distinct

models, their uses and impacts are cumulative. Actually, "none of the models have been discredited or dropped from our arsenal of conceptual models… When they were developed, they captured an institutional response to one set of challenges, and they are still useful now… Also, our models have moved from a focus on specific aspects of an organization to a more holistic focus on the entire organization or on the organization and the environment. Many of these most recent models incorporate or accommodate other models" (Peterson, 2007: 177). In a similar vein, Bleiklie *et al*. (2017) underscore the point that modern universities are hybrid organizations encompassing characteristics from different organizational forms, e.g., 'professional bureaucracies', collegial or 'loosely coupled' organizations and corporate enterprises. Variations among the organizational forms are influenced by different institutional and national contexts (Bleiklie *et al*., 2017; Paradeise & Thoenig, 2013; Seeber *et al.*, 2015). The early conceptual models of universities, therefore, have not been abandoned and in some form or another are incorporated in the organizational arrangements of modern universities. Moreover, an integrative approach to the organizational analysis that draws on several different models can help to better grasp new patterns of structure and organizational dynamics within an HEI (Peterson, 2007).

Remarkably, the complex environmental conditions and the resultant modification of the higher education sector gave rise to a rich variety of organizational patterns and models as a means for achieving greater efficiency in addressing change (e.g., Taylor, 2006; Kováts, 2018). On a general level, there is an explicit trend towards transformation of the university from a 'loosely coupled' to a more 'tightly coupled' system with stronger institutional leadership, new management techniques, hierarchy and formal rule systems (Bleiklie, Enders & Lepori, 2017; De Boer, Enders & Leisyte, 2007). Thus, the policies and principles behind the 'new public management' reforms provided significant impact on the university governance structure by introducing "an executive structure separated from the academic domain that has become more hierarchical in its organization and functioning" (Fumasoli, Gornitzka and Maassen, 2014: 13). Further, academic and administrative structures, functions and processes have become increasingly diversified and distributed. Various units and positions have emerged as well as the importance of programs and projects has grown as the basis of organizational structures (Kováts, 2018). Importantly, the distributed organizational arrangements facilitated the development of what Whitchurch (2008) has termed as *Third Space* environments located between the spheres of teaching, research and administration. *Third Space* is associated with activities of staff with both academic and professional

credentials who work on broadly based projects and thereby, operate on the crossroads of multiple organizational domains with functional and cultural interchange (Whitchurch, 2008, 2012, 2015; Stoltenkamp, Van de Heyde & Siebrits, 2017; Veles, Carter & Boon, 2019). Viewed through the lens of organizational structure, third space activities may not reside explicitly within formal organizational structures (Whitchurch, 2008; 2015). Furthermore, third space work "blurs the traditional distinctions between center and periphery in the organization of university administration and management by operating at a new location" (Zahir, 2010: 56). Overall, the internal organizational structure of contemporary universities is characterized by the increased complexity (e.g., Baker, 2014; Wang, Avagyan & Skardal, 2017; Kováts, 2018) that has a strong impact on the institutional operations and its capacity for change.

Notably, the research literature lends importance to the role of organizational structure in promoting change (Burnes, 2009). It is essential to highlight the common themes across the body of the research literature that contributes to the understanding of how the organizational structure can facilitate change processes. The themes or characteristics common to organizational structures that help enable and sustain change are identified as follows: the existence of both differentiation and integration in organizational structuring; a balance between vertical control and horizontal coordination; congruence between structure and culture. Each of these themes is more fully developed in turn.

The organizational design literature suggests that it is essential for organizations operating in transformative environments to develop effective mechanisms for *both differentiation and integration in organizational structuring* (see, for example, Lawrence & Lorsch, 1986; Dill, 1997a; Yi, Stieglitz & Knudsen, 2018). Emanating from the contingency model of organizational design (Lawrence & Lorsch, 1986), this research stream emphasizes the link between the nature of the external environment and organizational structures (Dill, 1997a). It is argued that in a rapidly changing environment it is essential for organizations *to differentiate* into highly specialized units with particular expertise and possibly, specific values. Thus, a strong level of differentiation with sufficient autonomy of the units offers an organization a higher degree of flexibility in responding to external demands, using opportunities, and implementing change. At the same time, it is essential to develop mechanisms *to integrate* the work of different units efficiently. Without effective integrating mechanisms "differentiation can lead to duplication and conflict, even in research

universities… Effective organizations in transformative environment possess organizational structures with high levels of both differentiation and integration" (Dill, 1997a: 95).

Another characteristic of organizational structure which, in connection with differentiation and integration, can substantially enhance organizational flexibility to change, concerns *a balance between vertical control and horizontal coordination*. Bolman and Deal (2008) note in this respect that a significant challenge is to create an organizational structure that is not too loose and not too tight so that it allows to hold the organization together without holding it back (Bolman & Deal, 2008). As indicated by Bolman and Deal (2008):

> Successful organizations employ a variety of methods to coordinate individual and group efforts and to link local initiatives with corporation-wide goals. They do this in two primary ways: *vertically*, through the formal chain of command, and *laterally*, through meetings, committees, coordinating roles or network structures (Bolman & Deal, 2008: 54).

In effect, keeping a balance between vertical and horizontal procedures in coordination can have a powerful effect on an organization's motivation for development and change.

Lastly, the research literature draws attention to the interaction between organizational *structure and culture* (e.g., Zheng, Yang & McLean, 2010; Janićijević, 2013). Moreover, it is observed that if structure and culture are in congruence, managers will have a better chance to solicit widespread support by implementing change initiatives. Of note, the concept of organizational structure can be considered from traditional and cultural perspectives (Toma, 2010). The traditional approach focuses on how organizations are formally structured or as Birnbaum (1988) put it, "how colleges work" (Birnbaum, 1988). Thus, in professional bureaucracies, the emphasis is placed on the rationality within organizations and the importance of organizational charts, i.e., who reports to whom (Mintzberg, 1979; Birnbaum, 1988). Conversely, "the cultural perspective on structure is not just about the functions of the organization, but also about the contexts in which actual people perform these functions. Structure and institutional culture are thus inherently connected" (Toma, 2010: 80). According to Weick (1976), an organizational chart cannot give the full picture of how things are done in a HE context because universities are loosely coupled systems. Clark (1998) points out that "organizational values ought not be treated independently of the structures and

procedures through which they are expressed" (Clark, 1998: 8). Overall, when considering structure within universities and colleges, it is essential to draw on both traditions (Toma, 2010). Further, it is important to be cognizant of the fact that organizational structure and culture in their mutual interaction can significantly influence organizational performance and change.

2.7.3 Organization culture

The concept of culture has been the subject of substantial academic discussions in the last twenty-five years (Schein, 2004). Accordingly, there are numerous definitions of organization culture featuring diverse perspectives of various disciplines (Kuh & Whitt, 1988; Schein, 2004; Martin, 2002). Ostroff, Kinicki & Muhammad (2013) note in this respect that various disciplines (i.e., sociology, anthropology, and psychology) use different epistemologies and methods by studying organizational culture; as result, this concept has a variety of meanings and connotations.

In the framework of consistent views on what counts as organization culture, the emphasis is generally laid on values, deeply held beliefs and attitudes, shared norms as well as history and traditions that guide organizational behavior (e.g., Schein, 2004; Peterson & Spencer, 1991; Hunt, 1991; Denison, 1996; Martins & Terblanche, 2003; Toma, 2010; Isaksen & Ekvall, 2010; Burke, 2014). For example, Peterson and Spencer (1991) define culture as "the deeply embedded patterns of organizational behaviour and the shared values, assumptions, beliefs, or ideologies that members have about their organization or its work" (Peterson & Spencer, 1991: 42). In a similar vein, Martins and Terblanche (2003) define organizational culture as "deeply seated (often subconscious) values and beliefs shared by personnel in organization" (Martins & Terblanche, 2003: 65). This stream of research argues that organizational culture is the fundamental character of an institution (Toma, 2010; Toma, Dubrow & Hartley, 2005; Martin, 2002) consisting of "the norms, values and beliefs of organizational members (substance) and the more tangible ways that organizations express meanings (forms): literally "they ways we do things around here" (Toma, Dubrow & Hartley, 2005: 56). Overall, the research literature suggests that understanding organizational culture is like peeling a multi-layered onion (Kuh & Whitt, 1988) comprised of the outer layer, i.e., the organization's *artifacts* (visible organizational structures and practices), the middle layers, i.e., *the espoused values* (strategies, goals, philosophies); and the inner core comprised of the underlying

assumptions (unconscious, taken-for-granted beliefs, perceptions, etc.) (Eckel, Hill & Green, 1998; Schein, 2004).

Remarkably, in an important early contribution to the literature on culture in higher education, Kuh and Whitt (1988) underline the impact of culture on the behavior of faculty and students, the holistic and evolutionary character of this phenomenon as well as the influence of the external environment on institutional culture (in this doctoral study, the term 'institutional culture' is used interchangeably with 'organization culture'). From this perspective, Kuh and Whitt (1988) define culture in higher education as:

> The collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behaviour of individuals and groups in an institution of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus (Kuh & Whitt, 1988: 12-13).

Furthermore, by using the cultural lens for understanding educational organizations, the research literature draws attention to the existence of subcultures in an HE setting (e.g., Kuh & Whitt, 1988; Chaffee & Jacobson, 1997; Trowler, 1998; Toma, Dubrow & Hartley, 2005; Toma, 2010). In this framework, much research on subcultures focuses on academic personnel, members of academic administration, and students. A brief sketch of these subcultures is provided in the following paragraphs.

Subcultures related to faculty members arise along the society at large, the academic profession, a particular subject field, a specific institution, and a chosen inquiry paradigm (e.g., Toma 1997; 2010; Toma, Dubrow & Hartley, 2005). For example, viewed through the lens of academic disciplines, faculty members develop various subcultures through the disciplinary identity. Thus, seminal works of Becher (e.g., 1981,1994) and Becher and Trowler (2001) emphasize the impact of the knowledge structures of the disciplines (the 'academic territories') on the behavior and values of faculty members, so that "disciplinary groups can usefully be regarded as academic tribes, each with their own set of intellectual values and their own patch of cognitive territory" (Becher, 1994: 153). Nonetheless, some authors argue that subcultures of academe affiliated with the disciplinary identity or inquiry paradigm, "most fall into the enhancing or orthogonal type. They support the dominant

purpose of the institution (mission), its norms, values, and beliefs (culture), and likely its significant aspirations (vision)" (Toma, Dubrow & Hartley, 2005: 53).

Members of administration may create subcultures based on their professional orientation, e.g., academic affairs, student affairs, business services, etc.; and/or based on hierarchy featuring different outlooks of executives, managers, and support staff (Toma, 2010). Of note, a considerable body of research is devoted to the cultural differences between faculty members and administrators (e.g., Duderstadt, 2001; Chaffee & Jacobson, 1997; Bartell, 2003; Welsh & Metcalf, 2003; Fralinger & Olson, 2007). Faculty members value autonomy and are committed to their disciplines as the basis for their personal interests, career and professional activity (Silver, 2003). Administrators, on the contrary, direct their attention to the realization of organizational goals and place a strong emphasis on the interaction with external stakeholders (Chaffee & Jacobson, 1997; Bartell, 2003; Welsh & Metcalf, 2003; Fralinger & Olson, 2007).

Lastly, students may also form distinctive subcultures. Thus, Toma, Dubrow and Hartley (2005) argue that groups of students and their respective subcultures may be differentiated on the basis of extracurricular activities and social networks as well as from the perspective of their interests and their relationship to the institution. The authors note that these schema of discussing students' values are rather general and somewhat superficial; nevertheless, they can be usefully employed to illustrate "some of the various ways students connect with their institution, sometimes holding values consonant with those of the institution (enhancing and orthogonal) and other times standing in stark opposition to it (countercultural)" (Toma, Dubrow & Hartley, 2005: 53). Overall, students' culture, like that of faculty members and administrators, is determined by common features and separate subcultures and as such, it also contributes to the broader institutional culture (Toma, 2010).

It is important to mention that the academic cultural landscape is not static. Just as the environment surrounding the twenty-first-century university has become more complex, diversified and challenging, so also the institutional cultural environment is being influenced and shaped by complex organizational developments. The neoliberal ideologies and practices, discussed before, essentially diversified the academic life and culture through multiple processes that have been variously characterized by scholars and summed up by Tight (2010) as 'casualisation' (Bryson & Barnes, 2000), 'commodification' (Willmott, 1995),

'feminization' (Goode, 2000), 'industrialization' (Winter, 1995), 'marketization' (Enders, 2001), 'McDonaldization' (e.g., Prihard & Willmott, 1997), and 'proletarianization' (e.g., Halsey, 1995). These processes brought about fundamental changes in an HE context, including, among others, diversification, fragmentation and polarization of academics alongside the weakening of the distinction between academic professions and identities (Ylijoki & Ursin, 2013); the rise in adjunct, short-term academic staff (Kezar, 2018; Tight, 2010); as well as "the gradual reshaping of professors as academic leaders, to serve the marketised university" (Evans, 2018b: 260). Also, *Third Space* professionals "have increasingly their say in the core academic tasks and duties, which has enhanced their standing relative to academics in university hierarchies" (Ylijoki & Ursin, 2013: 1136). Furthermore, the decline of donnish dominion (Halsey, 1995) denoted a parallel decline of the power of disciplinary knowledge structures (Becher & Trowler, 2001). Thus, the rapid expansion and fragmentation of academic knowledge has diminished prior agreement on academic norms, standards, and content at the level of individual disciplines so that disciplinary cultures in modern universities do not appear to play a major role in coordinating and controlling academic behaviour (Dill, 2012). As a result, the notion of an academic as a tribe member with a firm disciplinary identity and the respective image the university composed of 'disciplinary tribal territories' have become less visible in the twenty-first century university (Ylijoki & Ursin, 2013; Evans, 2018b). Evidently, the complex organizational processes involving significant managerial and structural modifications brought major changes in HE settings and the traditional academic culture respectively (e.g., Deem, 1998; Deem & Brehony, 2005; Anderson, 2008).

At the same time, various studies demonstrate not only considerable changes in academic life and culture but also continuity (Ylijoki & Ursin, 2013).Thus, some scholars recognize that traditional academic values, i.e., disciplinary commitment, autonomy and academic freedom, as well as norms and practices distinguishing disciplinary communities remain persistent (e.g., Henkel, 2005; Ylijoki, 2005). Another set of work reveals that managerial guidance and control leaves space for personal autonomy, agency and self-regulation despite the pressures of performativity and accountability (e.g., Clegg, 2008; Gornall & Salisbury, 2012). For example, Kolsaker (2008) examined the relationship between managerialism and academic professionalism in English universities and found that "academics appear, on the whole, to accept managerialism not only as an external technology of control, but as a facilitator of enhanced performance, professionalism and status" (Kolsaker, 2008: 522). Also, the

development of ‘third space’ between professional and academic spheres of activity (Whitchurch, 2008) is subject to different interpretation in academic settings. For instance, some consider this trend as a challenge to the established models of academic life (Rhoades, 2010), whereas others argue in favour of this development that offers an opportunity to rethink academic identities and recognize the *Third Space* professionalism (Whitchurch & Gordon, 2010). Research in higher education, therefore, suggests that multiple perspectives of academic staff is the prism through which the intricate issues of continuity and change in the academic work and culture are to be considered. Accordingly, complex variations in academic culture are intrinsically related to local differences and specifics of various organizational settings, practices and values.

In view of the above, contemporary discussions of organizational culture often proceed on the epistemological assumption that the organizational environment is “socially constructed” (Tierney & Lanford, 2018). A socially constructed view of organization’s culture “acknowledges the pluralistic, occasionally cacophonous landscape of the contemporary university, where experts are brought together from a wide range of backgrounds and disciplines” (Tierney & Lanford, 2018: 2). Accordingly, Silver (2003) conceptualizes organizational culture in modern universities as a ‘culture of tolerance of diversity’, a ‘culture of extreme diversity’ or a ‘culture of fragmentation in tension’ and raises the issue of whether a unified university culture exists. Other research, however, indicates that “the common approach to institutional culture in higher education is to argue that it fosters a sense of “oneness with or belonging to” a university or college as an organization” (Toma, Dubrow & Hartley, 2005: 3). As discussed previously, the latter stream of research defines organizational culture as the essential character of an institution expressed through the shared norms, beliefs and values and the various forms which make these tangible (Toma, 2010; Toma, Dubrow & Hartley, 2005; Martin, 2002). From this perspective, organizational culture communicates identity, fosters commitment and “provides constant and tangible reminders of what is distinctive, central, and enduring about an organization” (Toma, Dubrow & Hartley, 2005: 18).

Notably, as Martin (1992; 2002) suggests, organizational culture can be considered from integrative, differentiated, or fragmented perspectives. From an integrative perspective, organizations possess an overriding or gestalt culture; this approach does not exclude the existence of multiple components or dimensions though. In effect, most studies to date have

taken an integrative perspective, albeit this understanding of the organizational culture is still being debated in the literature (Ostroff, Kinicki & Muhammad, 2013). The differentiated perspective posits that organizations have numerous subcultures, whereas a fragmented viewpoint is premised upon the ambiguity of knowing whether overriding culture and subcultures exist. Overall, research suggests that "organizational culture can be studied at multiple levels or units of analysis (e.g., organizational, departmental, functional, etc.) and from different vantage points (gestalt vs. subculture vs. configural system)" (Ostroff, Kinicki & Muhammad, 2013: 647). In this doctoral study, the conceptualization of the organizational culture draws on an integrative perspective with the emphasis on deeply embedded set of beliefs and values that define the fundamental character of the institution of higher education.

It is noteworthy that higher education research offers useful typologies of dominant organizational cultures that help understand cultural distinctiveness between universities as organizations (e.g., Birnbaum, 1988; Bergquist, 1992; Goffee & Jones, 1996). By way of example, Goffee and Jones (1996) give insights into the cultural specifics of the academy by exploring differences in organizational culture from a sociological perspective. They develop a matrix for understanding organizational cultures based on two dimensions: *sociability*, i.e., a measure of sincere friendliness among organizational members; and *solidarity*, i.e., a measure of institutional ability to pursue shared goals efficiently, regardless of personal ties. These two dimensions of culture result in four different types of organizational culture: networked, mercenary, fragmented and communal. In this framework, universities are considered to be fragmented organizations with low sociability and low solidarity. McNay (1995; 2006; 2007) distinguishes between four cultures of HEIs based on the degree of central control over policy development (tight/loose) and policy delivery. These cultures are: collegium, characterized by loose policy and loose operational control, with the emphasis on freedom in accordance with the Humboldtian concepts of the university; bureaucracy, characterized by loose policy and tight operational control, with the emphasis on rules and regulations; corporation, characterized by tight policy and tight operational control, with decisions made by the center; enterprise, characterized by tight policy and loose operational control, with the focus on innovation and creativity, market opportunities, commercialization and service to students and other clients (McNay, 2007). In fact, all four cultures co-exist in most universities. The difference is in balance which is determined by many factors including traditions, mission, leadership style and external pressures (McNay, 1995).

It is important to emphasize that a considerably body of research argues for the importance of distinguishing between the organizational culture and climate (e.g., Burke & Litwin, 1992; Burke, 2014; Slater & Narver, 1995; Toma, Dubrow & Hartley, 2005; Isaksen & Ekvall, 2010; Shanker, 2015). Of note, like the concept of organizational culture, the concept of climate has had multiple definitions. Thus, by reviewing the literature between 1960 and 1993, Verbeke, Volgering & Hessels (1998) found fifty-six definitions of organizational culture and thirty-two different definitions of organizational climate. What is widely accepted, however, is the view that climate refers to the recurring patterns of behavior, feelings and common perceptions of employees about the working environment (e.g., Isaksen *et al.*, 2001; Isaksen & Ekvall, 2010; Shanker, 2015). Actually, by defining climate in terms of perceptions of organizational members about their local work unit (e.g., how it is managed, how effectively coworkers can work together), Burke and Litwin (1992) argue that the level of analysis for climate is the group, the work unit; whereas the level of analysis for culture (defined by belief and values) is the organization. However, the organizational climate researchers suggest that climate can also be advanced at the individual and organization levels (Isaksen *et al.*, 2001). As indicated by Isaksen *et al*. (2001), at the individual level of analysis, the concept is called 'psychological climate' and refers to the individual perceptions of the patterns of behavior. When aggregated, the concept is called 'organizational climate' featuring the objectively shared perceptions of life in the organization. According to James *et al*. (2008), "organizational climate has come to be viewed as a logical extension of psychological climate. It is now generally defined as shared psychological meanings…The important caveat is that these psychological climates are shared in order to make the inference that an organizational climate exists" (James *et al*., 2008: 15-16).

Admittedly, organizational culture and climate have similarities (Denison, 1996) - "…in any organization, rarely, if ever, is a single variable discrete…" Burke, 2014: 223). Still, it is essential to make a distinction between culture and climate as well as to understand the relationship between the two constructs (Ostroff, Kinicki & Muhammad, 2013). As discussed above, organization culture is deeply rooted in fundamental ideologies, core values and underlying assumptions of the organization. By contrast, climate refers to common perceptions of practices, i.e., how the organizational members experience their workplace (e.g., Peterson & Spencer, 1991; Toma, 1997). Climate, therefore, is about experiential perceptions of *what* happens, whereas culture helps to explain *why* these things happen (e.g., Ostroff, Kinicki & Muhammad, 2013; Schein, 2000). Accordingly, as Burke and Litwin

(1992) argue, climate is in the foreground of organizational members' perceptions, whereas culture is more in the background. "Climate is, of course, affected by culture, and peoples' perceptions define both, but at different levels" (Burke & Litwin, 1992: 526-527). Further, the research literature indicates that "practices, policies, procedures and routines play a role in both culture and climate. They are viewed as artifacts in culture… while in the climate literature they are viewed as the basis for the formation of climate perceptions" (Ostroff, Kinicki & Muhammad, 2013: 657). In fact, culture "can lead to a set of relevant practices that are then perceived by organizational members as climate" (Ostroff, Kinicki & Muhammad, 2013: 657). From this perspective, climate, or *what*, can result from espoused values and shared tacit assumptions and thus can be considered as a manifestation of enacted values (Ostroff, Kinicki & Muhammad, 2013). Continuing this line of thought, Isaksen *et al.* argue that "climate is distinct from culture in that it is more directly observable within the organization" (Isaksen *et al.*, 2001: 172). Overall, Burke and Litwin (1992) contend that "although there are similarities, understanding the differences between culture and climate is one of the keys to understanding organization change more thoroughly" (Burke, 2014: 223). In a similar vein, Tierney and Lanford (2018) argue that a deeper understanding of culture has become vital for those who wish to encourage an innovative climate… (Tierney & Lanford, 2018: 2).

While featuring the difference between the elements of culture and climate, much of the research suggests the importance of nurturing the synergetic relationship between the two. For the purposes of this study, it is essential to highlight the work of Slater and Narver (1995) focused on market-oriented learning organizations (Slater & Narver, 1995). The authors argue that market orientation together with an entrepreneurial drive (i.e., the distinctive feature of 'enterprise' in McNay's terminology) build the cultural foundation for organizational learning and thereby, create the environment conducive to change and innovation (Slater & Narver, 1995). At the same time, the authors contend that market-oriented, entrepreneurial culture must be reinforced by an appropriate climate to create a 'learning organization'.

By characterizing learning organizations, Slater and Narver (1995) detail five crucial components: the two critical elements of culture, i.e., market orientation and entrepreneurship; and the three elements of climate, i.e., facilitative leadership; organic and open structure characterized by the decentralized organizational architecture, fluid job responsibilities and extensive lateral communication; and a decentralized approach to planning. Further distinctive

features of learning organizations include openness to and interdependence with external learning partners; as well as learning-driven, bottom-up entrepreneurship encouraged by top management. In this framework, the authors underscore the importance of synergies among the above-mentioned organizational features and management practices for market-oriented learning organizations. To quote Slater and Narver (1995):

> By itself, an organic structure could provide only inefficiency and disarray. Market orientation without an entrepreneurial drive might focus the organization's efforts too narrowly… Thus, in isolation, the contribution of any one or two of these organizational features may be minor. The challenge for managers is to put all of these pieces together in a cohesive manner (Slater & Narver, 1995: 71).

Overall, the study of Slater and Narver (1995) bring into sharp focus a synergistic relationship between culture and climate as a powerful foundation for a learning organization.

There is abundant literature on how to foster organizational learning and develop learning organizations. Argyris and Schön (1978) distinguish between three levels of organizational learning and focus on ways to increase the quality of learning in organizations. Senge (1990) explores five disciplines that are central to organizational learning leading to organizational change, namely, systems thinking, personal mastery, mental models, team learning and building a shared vision. From this view, Carneiro (2010) highlights systemic thinking as the central characteristic of learning universities. Euler (2010) puts forward relevant ideas about how to shape learning cultures at the strategic level in universities. Dolence and Norris (1995) explore the framework for transforming higher education based on organizational learning.

Notably, Örtenblad (2001) makes a useful distinction between organizational learning as existing processes or activities by which an organization learns and a learning organization as an ideal organizational form defined by the capacity to learn and outcomes of learning. As discussed above, a learning organization as an organizational form is associated with entrepreneurship and innovation which determine its cultural values and overall orientation. Accordingly, organizational scholars highlight the importance of enhancing entrepreneurial culture in universities (Clark, 1998; Davies, 2001). As Kezar notes, "the entrepreneurial organization needs further analysis " (Kezar, 2001: 127), especially in an HE setting.

In summary, the literature review suggests the following as the most important points for understanding the origin and processes of change within an HEI: (a) the environmental forces make it imperative for universities to introduce major changes in their operations and the internal processes; (b) universities as organizations are distinguished from other organizations by their structure and culture that present a major challenge for implementing change in an HE setting; (c) the dominant cultural modus impacts on university's change processes with climate playing a strong supportive role; (d) the synergetic relationship between organization culture and climate is an important factor in fostering organizational learning, innovation, and change.

With this overview of the complexity of changes facing higher education, the specifics of universities as organizations and some important relationships between organization structure, culture, climate and the internal processes affecting change, the next section details the model which is used as a heuristic tool to understand the role of structure, policy frameworks, management practices and climate in creating a change-enabling environment in an HE setting. This model guides the remaining literature review of this chapter.

2.8 Burke-Litwin Model of Organizational Performance and Change

The Burke-Litwin Model of Organizational Performance and Change (the Model) is a comprehensive model that explains how organizations function and how they can be changed (Burke & Litwin, 1992). The Model underscores the impact of external environment on organizations and addresses organizational change from a systems perspective while using a multilevel (organization, work groups, and individuals) and multidimensional analytical approach. In so doing, the Model calls attention to organizational dimensions that are key to successful change and shows how the causal linkages among the dimensions impact on the achievement of change goals. By discussing the Model, the literature review is structured around four main areas: (a) empirical and theoretical foundations; (b) transformational and transactional dimensions; (c) justification for selecting the Burke-Litwin model for this study; (d) the state of current literature relating to this Model.

2.8.1 Empirical and theoretical foundations

The Burke-Litwin model was designed as an instrument for organizational development, that is, for implementing planned and managed change efforts. The Model is grounded in the

studies of organizational climate conducted by George Litwin and his colleagues in the 1960s (Litwin & Stringer, 1968). The work provided the basis for developing an abbreviated organizational model with climate as a central component (Litwin, Humphrey & Wilson, 1978). The model was further developed when Burke and Litwin began their collaboration in the field of organizational change consulting (Burke, 2014). As Burke and Litwin (1992) note, the development of this Model was influenced by other thinking stemming from practical experience, namely, the McKinsey 7S Framework explained by Peters and Waterman (1982), Weisbord's (1976) model, and Nadler and Tushman (1977) model (Burke & Litwin, 1992). Thus, the Model emerged out of practice while being firmly grounded in theory (Burke & Litwin, 1992; Burke, 2014).

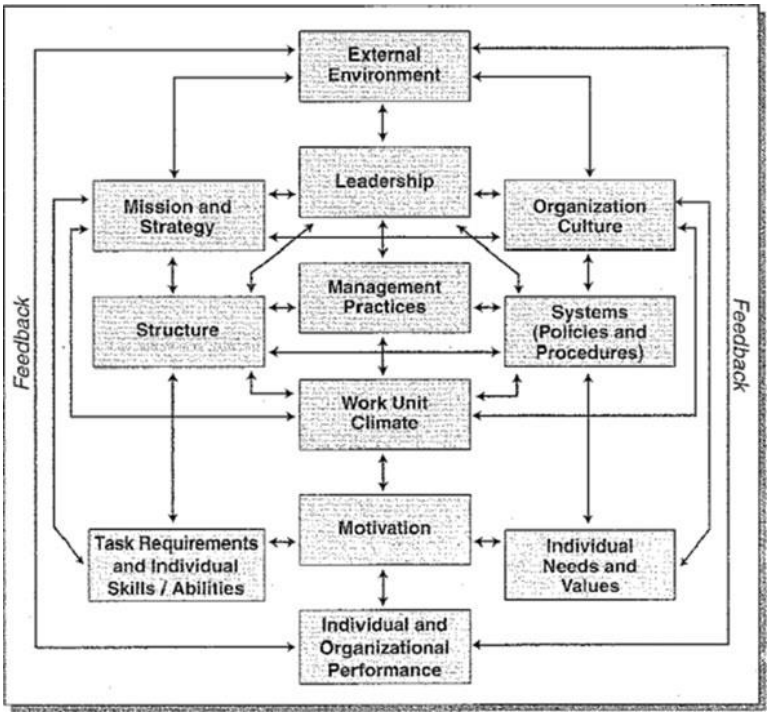


Figure 1. The Burke- Litwin Model of Organizational Performance and Change (Burke & Litwin, 1992).

From the theoretical perspective, the Model originates from the open-system theory, particularly developed by Katz and Kahn (Katz & Kahn, 1978). In the open system framework, organizations are viewed through the lens of an input-throughput-output with a feedback loop. As shown in Figure 1, the Model starts with the external environment box which represents inputs into the organization and concludes with the individual and organizational performance box, i.e., the outputs. The boxes between the environment and the individual and organizational performance feature throughput dimensions, whereas the

feedback loop connects the output with the environment and system inputs. In so doing, the feedback loop goes in both directions, thus indicating that organizational outcomes (e.g., products and services) influence the external environment and vice versa (Burke & Litwin, 1992; Burke, 2014). Also, in accordance with the open-system principle, the arrows linking the boxes point in both directions to indicate the interrelationship between the components, that is, a change in any component can potentially impact on the other components.

It is essential to note that some directions are more influential when it comes to introducing change. For example, although the arrows connecting organizational culture and systems go in both directions, culture has presumably more impact on systems. Similarly, in the case of large scale, organization-wide change, mission, strategy, leadership, and culture carry more weight because their impact on change processes is stronger as compared to structure, management practices, and systems.

In line with the above, the Model (see Figure 1) captures critical dimensions from the perspective of the level of change and the magnitude of change. With regards to the level of change, the Model differentiates between key variables at a total system level (mission, strategy, and culture), at a group or local work unit level (e.g., climate) and at an individual level (e.g., motivation, individual needs and values, and job-person match (Burke & Litwin, 1992). From the vantage point of the magnitude of change, the Model highlights the difference between transformational and transactional dimensions affecting change dynamics in organizations. The transformational and transactional dimensions, summarized and adapted from Burke and Litwin (1992) and Burke (2014), are presented below.

2.8.2 Transformational and transactional dimensions

Transformational dimensions. These are "areas in which alteration is likely caused by interaction with environmental forces (both within and without) and will require entirely new behaviour sets from organizational members" (Burke & Litwin, 1992: 529). These areas are:

- External environment - Outside conditions or forces that influence organizational performance, e.g. customer behaviour and satisfaction, political circumstances, government regulations or information technology.

- Mission and strategy - What top management believes and has declared as the organization's mission and strategy as well as what employees believe is the core purpose of the organization. A strategy is how the organization intends to achieve that purpose over an extended time scale.

- Leadership - Executives providing the overall direction for the organization and serving as behavioural role models for the employees.

- Culture - "the way we do things around here", as defined by Deal and Kennedy (1982). Burke and Litwin (1992) add this definition that culture is the collection of overt and covert rules, values and principles that are enduring and guide organizational behaviour. Also, Burke and Litwin (1992) note, with reference to Schein (1983), that key to explaining culture is the understanding of an organization's history, especially the values and customs of the founder(s). Overall, culture provides a "meaning system" for organizational members.

Transactional dimensions. These categories "represent organizational dimensions and activities that are more day-to-day operations than the transformational factors, and more incremental in making changes. They also are more related to the foreground (work unit climate) than to background (culture)" (Burke, 2014: 238).

- Structure - The arrangement of organizational functions and people into specific areas and levels of responsibility, decision-making authority, lines of communication and relationship. Structure leads to the implementation of the organization's mission, goals, and strategy.

- Management practices - What managers do each working day to realize the organization's strategy. Practices refer to a particular set of specific behaviours. An example of behavioural management practice is "encouraging subordinates to initiate innovative approaches to tasks and projects." In practice, two managers may "encourage subordinates" to the same extent, but they can do it differently.

- Systems - Standardized policies and procedures that are designed to facilitate work and support organizational members with their jobs and role responsibilities.

- Climate - The collective current impressions, expectations, and feelings of members within the same work unit including the perceptions of how well they are managed, in general; how clear they are about what is expected from them in the workplace: how they feel their performance is recognized; how involved they are in decision-making; etc.

- Task requirement and individual skills/abilities - The required behaviour for task effectiveness, including specific skills and knowledge required of people to accomplish the assigned tasks, i.e., job-person match.

- Individual needs and values - The specific psychological factors that provide the desire and worth for individual actions and thoughts; the extent to which one's needs are met on the job.

- Motivation - Aroused behaviour tendencies to move toward goals, take needed actions and persist until satisfaction is attained.

- Individual and organizational performance - The outcome or result as well as the indicator of effort and achievement (e.g., productivity, customer satisfaction, quality of product or service). Burke (2014) notes that for the Model to be more complete, it is essential to add a group, or work unit, to the description of this category. Because *output*, in the language of the open-system theory, refers to the outcomes of all the throughput activities that in turn are responses to *input*, i.e., the external environment. Further, the feedback loop indicates that the external environment may have a direct impact on performance in the broadest sense (Burke, 2014).

Importantly, in explaining the difference between transformational and transactional variables, Burke and Litwin (1992) further explain the distinction between culture and climate. The authors argue that day-to-day climate results from transactions around such issues as (1) sense of direction as an effect of *mission* clarity or lack thereof; (2) role and responsibility as an effect of *structure*, reinforced by manager *practice*; (3) standards and commitment as an effect of manager *practice*, reinforced by *culture*; (4) fairness of rewards as an effect of *systems*, reinforced by manager practice; (5) focus on customer versus internal

pressures, standards of excellence as an effect of *culture*, reinforced by other variables (Burke & Litwin, 1992: 533-534; emphasis in original).

By contrast, organizational culture is deeply rooted in the underlying values and meaning systems that are difficult to manage and change. Accordingly, within the Model, culture is not used to understand and describe the short-term dynamics of the organization; rather, it is used to delve into the more or less enduring values that underpin the social system. Importantly, culture creates the dimensions of climate, i.e., the underlying ideas and images that shape peoples' attitudes and behaviour in the organization. To quote Burke and Litwin (1992):

> When we describe culture as the underlying values and meaning systems of an organization, we describe those forces that create the dimensions of climate, those underlying ideas and images around which specific attitudes and behavior cluster. Thus, when we attempt to alter the organizational cluster, we change the climate framework (i.e., the gauge by which organizational members perceive their work climate) … The new organizational culture, as it becomes accepted, would create a modified, if not an entirely new set of dimensions around which climate would be perceived, described, and responded to (Burke & Litwin, 1992: 534).

Therefore, while being associated with the transformational change dynamics, organizational culture affects climate dimensions that have an important role to play in transactional change processes.

In summary, the Model shows how external and internal factors mutually influence organizational performance and change. By distinguishing between transformational and transactional variables, the Model highlights the leverage points for implementing transformational and transactional change in organizations.

2.8.3 Justification for selecting the Burke-Litwin model for this study

Organization change literature suggests that application of a relevant model can significantly contribute to the understanding of organizational behavior and change including universities as organizations (Kezar, 2001; Peterson, 2007; Burke, 2014). On a general level, the advantage of using an organizational model is that it can help, among other things, categorize numerous informational bits about organizational activities and behavior into manageable

pieces of information, thereby giving a clear picture on where to pay attention to; interpret data about an organization and on that basis, make correct decisions; improve language efficiency by providing a common, shorthand language; and/or guide action for change by showing what dimensions are more important under certain conditions (Burke, 2014). The choice of a model largely depends on the needs of a user in terms of how operational the model is, how adaptable to changing circumstances, etc. (Stanford, 2015).

As regards this doctoral study aimed at enhancing an understanding of transactional change dynamics in an HE setting, it was essential to identify an integrated model that may help understand organizational functioning and at the same time provide a way of thinking through a transactional change effort. More specifically, this model should help discern organizational components that have more weight in fostering and sustaining transactional change dynamics and thus give feedback on what to pay attention to by launching a transactional change initiative. Overall, it should be a commonly accepted, well-researched, comprehensive systems model - rooted in both research and change practice - that gives an overview of organizational components that are most important to consider by implementing transactional change in a multidimensional organization setting with dynamic-complex, intricate internal processes (see chapter 3). Considering all the above mentioned, several well-researched, integrated models were assessed for their utility in interpreting and explaining transactional change phenomenon in organizations. A comparison of the models evaluated from the viewpoint of their relevance for this case study research is presented in Table 2.

Models	Key components	Strengths	Limitations
7-S framework	- Systems - Strategy - Structure - Style - Shared values - Structure - Skills	- description of key organizational domains affected by processes of organizational change - recognition of the interaction between these domains	- no external environment (input)/throughput/output element - no feedback loops - no performance variables
Weisbord's Six-Box Model	- Purposes - Structure - Rewards - Helpful mechanisms - Relationships Leadership (coordinates other five areas)	- shows the most important organizational components - helps identify priorities - useful for making a rapid and simple diagnosis	- focus on some elements may lead to overlooking of others - too simplistic
Nadler-Tushman's Congruence Model	- Informal organization - Formal organization - Individual - Task (with inputs and outputs)	- suggests certain cause-effect linkages (the idea of congruence) - allows for discussion of what comprises "informal" and "formal" organization - considers the impact of the external environment	- few named key elements may lead to overlooking of crucial aspects - no indication what elements are more central in comparison to other dimensions
Tichy's Technical, Political, Cultural (TPC) framework	- External environment (input) - Mission - Strategy - Tasks - Prescribed networks - Organizational processes - People - Emergent networks	- includes most of the components crucial for understanding and especially changing organizations (Burke, 2014)	- the 'people' component is hardly mentioned - individual-level issues have a lower priority as compared to group and organizational levels (Burke, 2014)
Burke-Litwin model of organizational performance and change (1992)	- External environment - Mission and strategy - Leadership - Culture - Structure - Management practices - Systems - Climate - Task requirement and individual skills/abilities - Individual needs and values - Motivation - Individual and organizational performance (Plus feedback loops)	- comprehensive systems model - explicates the impact of the external environment on organizations - emphasizes causal relationships between key organizational variables - incorporates a set of variables that help to delve into the complexity of organizational dynamics - transformational-transactional distinction allows for exploring the impact of key variables on organizational change - embraces multiple levels (organization, work groups, and individuals)	- rather complex - oversimplification of reality - no elaboration on the ways to implement organizational change

Table 2. Comparison of organizational models. Adapted from Stanford (2015).

As it can be seen in Table 2, the Burke-Litwin model best fits the purpose of this doctoral research in comparison with other models. Five major characteristics make this Model

especially useful for delving into the transactional change phenomenon in an HE setting: (a) comprehensive nature of the Model; (b) an explication of the influence of the external environment on the key organizational dimensions and change processes respectively; (c) a clear distinction between transformational and transactional domains within an organization-as-system; (d) focus on interrelationships of the key organizational domains and their likely responses to change; (e) attention to the key factors that underpin organizational change dynamics at the system, group, and individual levels. Obviously, as other organization models, the Burke-Litwin model has some limitations that will be discussed more fully later in this section. Burke (2014) notes in this respect that it is hardly possible to be certain that the categories of the Model are the primary and correct ones and no crucial components have been left out. Also, some researchers argue that reliance on one model by analyzing a single social setting seems to be a drawback, in particular when used for diagnostic purposes (Martins & Coetzee, 2009). In a similar vein, Kezar (2001) highlights the advantage of using several models to analyze organizational processes in higher education on the grounds that different models help combine insights of various change theories. Admittedly, an integrative approach to the analysis of the transactional change in universities that builds on more than one model would offer a much broader perspective on the transactional change phenomenon in an HE setting. Nevertheless, the strengths of the Model outlined above, most importantly, a clear distinction between the transformational and transactional components as well as an integrated systems approach to conceptualizing and managing transactional change at different organizational levels make the Burke-Litwin model instrumental in interpreting and explaining the transactional change phenomenon in the framework of this doctoral research.

2.8.4 Situating the Burke-Litwin model in literature

The literature review reveals that the Burke-Litwin model has been extensively used in business management literature. Increasingly, the Model is addressed in public-sector research. In this framework, the literature relating to the Burke-Litwin model in higher education is growing but still limited.

Business and public-sector literature. At the general level, the Model is widely used for organizational diagnosis, with the aim to improve performance, to identify critical factors that need attention by implementing change, and to guide and manage planned change. Below are some examples of how the Model has been used in business and public-sector literature.

Martins and Coetzee (2009) explored the utility of the Burke-Litwin model as a diagnostic framework for assessing the factors that impact on the organization's performance and effectiveness. Their research setting consisted of an international hotel group, comprising more than seventeen different nationalities. The study addressed both, transformational and transactional dimensions for categorizing and analyzing the collected data to elucidate the factors that affect organizational effectiveness (Martins & Coetzee, 2009). Importantly, Martins and Coetzee (2009) highlight the influence of transactional factors, especially specific aspects of task requirements, individual skills, management practices and the work environment on the organizational effectiveness. Overall, while Martins and Coetzee (2009) consider the Model to be quite complex and admit limitations in using only one model, the authors indicate they share the observation of other researchers made in the past that "the Burke-Litwin model appears to be an extremely useful framework for diagnosing and planning change from a multidimensional systems perspective" (Martins & Coetzee, 2009: 154). On the whole, Martins and Coetzee (2009) show that the Burke-Litwin model is a convenient and valid tool for the identification and explanation of multiple key organizational phenomena that exert influence on organizational performance and effectiveness.

Since the Burke-Litwin model provides a well-defined approach to categorization of essential organizational components, the Model has fueled extensive research on the role of key variables (transformational and/or transactional ones) in influencing various organizational processes including change. One example is Kinnear and Roodt's (1998) study in which the Model helps to single out dimensions that may contribute to organizational inertia as well as to develop an instrument for measuring inertia in an organization. The authors note that the Model proved to be useful to divide organizational data into relevant categories, to cover the necessary domains related to organizational change and to explicate a mutually affecting interaction between the variables. Further, the findings of the study of Kinnear and Roodt (1998) presented evidence that transactional components, particularly management practices, change-related systems, work-unit climate, task requirements and individual experience of change, revealed themselves as the crucial factors contributing to organizational inertia. From the perspective of this doctoral research, the finding indicated above is essential for better understanding the impact of transactional dimensions on fostering or impeding incremental change in an organization.

In the study of Johnson (2004), the Burke-Litwin model serves as the foundation for gathering data about public and private sector firms implementing significant organizational change. As indicated by the authors, the Burke-Litwin model was very useful in the development of the quality standard performance outcome model with the focus on the transformational factors of change. Notably, in the framework of the quality standard study conducted by Johnson (2004), structure and systems classified in the Burke-Litwin model as transactional factors have been defined as transformational in nature. Remarkably, this finding has echoes in the study of Chawane, Vuuren and Roodt (2003) who question whether the transformational factors are 'weightier' and 'more fundamental' as compared to the transactional factors, particularly when taking into consideration the reciprocity of the components of the Model. Notably, Martins and Coetzee (2009), whose study was highlighted above, are also of the opinion that a note of caution should be taken against interpreting the transformational factors as more important than the transactional ones in planning organizational change.

In line with the above, the study of Alas and Sharifi (2002) bring into focus the mutual shaping relationship between the transformational and the transactional factors. By looking at organizational change and performance in Estonian companies through the lens of learning and resistance to change, the authors argue that the transformational factors define and shape the transactional factors, whereas the latter can reinforce or dilute the former (Alas & Sharifi, 2002). This finding concurs with research that emphasizes the integrative effect of the transformational and the transactional factors on the organization's change. For example, Harvey and Broyles (2010) explicitly link transformational change with incremental transactional changes in arguing that transformational change cannot occur without transactional, adaptive changes.

Along with research on the application of the Model to business organizations, the Model is increasingly used in public organizational settings including healthcare, education, and government sectors.

Coghlan and McAuliffe (2003) adapted the Model for use in the healthcare environment by looking at both transformational and transactional domains comprising the Model. Lee *et al*. (2014) used the Model for evaluating changes in organizational capacity by implementing the Network of Health Promoting Hospitals (HPH) initiative in Taiwan. The authors underscore the point that - as a comprehensive and practical model - the Burke-Litwin model can be

applied to a wide range of health service management scenarios (Lee *et al*., 2014). Essentially, alongside other researchers whom the Burke-Litwin model assisted in the development of a model tailored to one's particular research (e.g., Johnson, 2004), the study of Lee *et al*. (2014) essentially built on the Model by constructing seven dimensions of the diagnostic framework of the need for change in organizational capacity to implement HPH.

The study of Oterkiil and Ertesvåg (2012) provides further support for the validity of the Burke-Litwin model to organizational research in general and as a foundation for developing an assessment system, in particular. The Model combined with school-based theory and research provided a solid foundation that allowed the authors to pinpoint the most relevant areas that impact on school's readiness and capacity for improvement and are thus important to take into consideration before embarking on a change initiative in a school setting. As Oterkiil and Ertesvåg (2012) emphasize, the main strength of the Model "is the overview it provides by integrating a number of major change factors highly relevant to schools" (Oterkiil & Ertesvåg, 2012: 76).

More recently, the Model was applied to assess the organizational performance of a local government in South Africa by using a mixed-methods research approach (Olivier, 2017). As indicated by Olivier (2017), for the purposes of the study, it was important to choose an organizational model that meets certain diagnostic requirements. Particularly, the model must be well-researched and embrace as many elements of organizational functioning as possible. As such, the Burke-Litwin model has proven to be "a useful and valid diagnostic framework for identifying the strengths and development areas of an organization's performance, as has been confirmed by other studies…" (Olivier, 2017: 12).

Higher Education Literature. As noted earlier, the Model is rarely applied to an HE setting. However, the Model has been used for organizational diagnosis as well as to guide and manage planned change within an HEI.

Hardy and Rossi (2008) explored the development of creativity and innovation in an HEI striving to improve performance and to reposition itself in its competitive environment. The general theoretical framework was 'learning organization', whereas the Model was used as a tool for the theoretical analysis and the implementation of change. As such, the Model served

"as a diagnostic tool to better identify the key elements on which to concentrate efforts in order to achieve the objectives of organizational change" (Hardy & Rossi, 2008: 141).

Kondakci, Van den Broeck and Devos (2006) adopted the Model to explore internationalization in higher education as an organizational level managerial issue. In this framework, the authors thoroughly discussed transformational and transactional components of the Model with the focus on process, content, and context of internationalization. The authors argue that as one of the most comprehensive organizational change models the Burke-Litwin model is an effective method for analyzing the internationalization process as an organizational change process. Their findings suggest that the Model provides a helpful tool for scholars and practitioners to consider the domains of internationalization as well as to facilitate the implementation of the internationalization process. In terms of the concepts underpinning the Model, the authors point out that they "may sound new but not alien concepts to the academy. Since several decades scholars have been indicating the need to use such concepts in discussions on higher education" (Kondakci, Van den Broeck & Devos, 2006: 24).

It is noteworthy that the Model is increasingly used in doctoral research on higher education (e.g., Smith, 2011; Cooper, 2015; McKenzie, 2017). By way of example, Cooper (2015) applied the Burke-Litwin model for the purposes of both diagnosing and planning organizational change. The Model was used as the conceptual framework to explore shared services models that have been implemented in the context of enrollment management divisions in higher education institutions. Relationships between specific transactional components of the Model (e.g., management practices, structure, task requirements and individual skills/abilities, and motivation) were analyzed to better understand perceptions of employees within the shared services units. The Cooper's (2015) research featured the Model as a viable tool in guiding enrollment management organization structures. In another doctoral study (Smith, 2011), the Burke-Litwin model was applied to investigate the reorganization of the College of Education at Western University (WU) following mandated department eliminations as a result of budget cuts. The Model was used to examine the role and impact of individuals and groups within the college as well as the role of transformational and transactional components in implementing change (Smith, 2011). In the framework of Smith's (2011) research, the Model proved to be useful for viewing change processes though transformational and transactional components at systemic, group, and individual levels.

Notably, in a subsequent paper, Smith and Martinez (2015) explored the impact of transformational components of the Model on the reorganization of the WU's College of Education with particular attention to the role of leadership in relation to multiple components of the change process. The authors underscore the point that the Model combines theoretical and empirical insights, moreover, real-life experience, "making it practical for empirical studies as well as guiding and assessing change initiatives" (Smith & Martinez, 2015: 75).

Furthermore, some scholars, particularly Torraco, Hoover and Knippelmeyer (2005), have specially encouraged researchers to consider adapting the Model to understand organizational development processes in postsecondary institutions. The authors note that as a comprehensive systems model that embraces organization, group, and individual levels and shows how organizations interact with the external environment, the Model can be useful to guiding organizational change process in universities at an early stage of development as well as to examine the extent to which the Model can explain the evolvement of change in HEIs where organizational development is a more established practice (Torraco, Hoover & Knippelmeyer, 2005).

Thus, the literature specifically points to the Burke-Litwin model as an appropriate and relevant framework for understanding, instigating and guiding change in organizations including institutions of higher education. At the same time, an extensive literature review revealed twofold limitations of extant studies: one of them refers to the Model itself, and the other concerns the research gap in the studies using the Model.

For all of the stated utility of the Model it is important to reinforce the point that the Burke-Litwin model has limitations. Thus, it is acknowledged in the existing literature that the Model is rather complicated (e.g., Martins & Coetzee, 2009; Jones & Brazzel, 2006) and at the same time, provides an oversimplification of reality (e.g., Oterkiil & Ertesvåg, 2012) – in fact, both limitations were recognized by Burke and Litwin (1992). From the latter viewpoint, Oterkiil and Ertesvåg (2012) contend that the Model should place more emphasis on the fact that many organizational changes including educational settings are put in motion by leadership or internal factors, rather than by the external environment (Oterkiil & Ertesvåg, 2012). Being broadly consistent with the propositions made above, Spangenberg and Theron (2013) offer major modifications to the Model given significant environmental changes and

new developments in business management. It is beyond the scope of this research to go into details of the adopted Burke-Litwin model developed by Spangenberg and Theron (2013). For the purposes of this study, it is essential to note that Spangenberg and Theron's (2013) revised version considerably refines Burke and Litwin's (1992) insights, particularly by offering an improved design that emphasizes impact of external contextual factors on organizations not only through interactions with the transformational factors (mission-strategy, leadership and organizational culture) and performance (outcomes) - as it is the case in the Burke-Litwin model - but also by interacting with the management and the process efficiency and individual talent levels (Spangenberg & Theron, 2013). As indicated by the authors, the openness of the revised model enables direct interaction between the external environment and for instance, core processes, systems and individuals at all levels, thereby fostering wide and speedy information flow that, in turn, assist leaders to bring about a timely response to major changes in the external environment. In effect, the above-mentioned findings of Spangenberg and Theron (2013) are in line with the research results underpinning this study. However, the revised model focuses on intricate processes of organizational and people's performance and effectiveness, i.e. not on change, and thus deliberately moves beyond the transformational-transactional paradigm (Spangenberg & Theron, 2013). Thus, this doctoral research draws on the original version of the Burke-Litwin model while using it as a heuristic tool to capture organizational dimensions that play a crucial role in understanding transactional change processes.

Regarding extant studies using the Model their predominant focus is placed on *what* to change and *why* in organizations, including HEIs. From this perspective, the previous research indicates that the Model proved to be useful for spotlighting essential areas that need to be considered by organizations that strive to enhance institutional performance and effectiveness as well as for guiding organizational diagnosis and planned, managed change. However, the literature review revealed a deficiency in heuristic-based approaches that could help enhance an understanding of *how* the key dimensions of the Burke-Litwin model, individually and in synergy, enable and foster institutional change, including universities as organizations. Furthermore, the literature review suggests that most of the extant published studies focus on transformational dimensions or look at change processes through the lens of complex relationships among all the main areas of the organizational design depicted in the Burke-Litwin model. The research that systematically examines the role of transactional factors in

organizational change processes is limited, and there is a lack of studies on how transactional factors interrelate and create a change-enabling environment, especially in HE settings.

In summary, the literature review indicates that the Burke-Litwin model is widely discussed in business management studies; furthermore, a review of recent higher education literature shows that the Model is useful and appropriate in investigating organizational change in HEIs. Limitations aside, organization studies present the Model as an efficient diagnostic tool and a useful analytical framework for addressing change in organizations. In this framework, a rich body of literature focuses on transformational dimensions or both, transformational and transactional ones. The literature review did not reveal studies examining the role of transactional dimensions, i.e., structure, policy frameworks, management practices, and climate, in creating an environment conducive to change in universities as organizations.

2.9 Summary

This chapter has examined the theoretical and empirical literature on organizational change. The focal areas of the reviewed literature are as follows: the definition of organization change; the key factors underpinning dynamics of change (types; levels; content, process and context); current trends and developments in understanding organization change; complexities of change in higher education as well as the essential characteristics of universities as organizations. Finally, the literature review has detailed the Burke-Litwin model which this study uses as a heuristic tool to capture organizational dimensions that have a pivotal role to play in a transactional change process. The theoretical assumptions and conjectures spotlighted in the literature review chapter will be further addressed in relation to the empirical findings underpinning this research.

A review of the literature has revealed important research needs. Thus, the literature tends to address policy issues in higher education rather than the university as a unit of analysis. Most research focuses on the implementation of planned change in organizations including universities; however, few studies explore the emergent change in an HE setting. Another area that requires research attention relates to a better understanding of managerial tactics to organize transactional change processes within an HEI. Further research is needed on how organization structure, policy frameworks, management practices, and climate interrelate, thereby shaping a change-enabling environment in institutions of higher education. Besides, there is a need to deepen the research on the entrepreneurial university where the internal

organization is an essential enabling factor in implementing any type of change. This dissertation aims to address some of the identified research needs by exploring the role of organizational structure, policy frameworks, management practices and climate in creating an environment conducive to transactional change in a higher education setting. The angle on examining transactional change within an HEI will be to look at the extent to which transactional dimensions of the Burke-Litwin model provide an explanation of how transactional change occurs in universities as organizations.

The next chapter describes the case study initiative – the Leuven Community for Innovation driven Entrepreneurship (Lcie) – viewed through the lens of the influence of the external environment and the institutional context on its implementation.

CHAPTER 3 TRANSACTIONAL CHANGE INITIATIVE AT KU LEUVEN: AN OVERVIEW OF RESEARCH CONTEXT

3.1 Introduction

This chapter addresses the Leuven Community for Innovation driven Entrepreneurship (Lcie), i.e., a transactional change initiative implemented by KU Leuven, Belgium, as well as the contexts, both external and internal, in which this initiative was set up. By taking a contextually-focused view on Lcie, the study aims to spotlight the antecedent factors that establish the background to this transactional change initiative.

The chapter unfolds as follows. The first section presents insights into the external environment in which KU Leuven operates followed by the description of the defining institutional characteristics. The subsequent section provides an overview of Lcie with the focus on its rationale, implementation strategy, and major outcomes.

3.2 Background to the research context

This section focuses on the external and internal contexts behind the transactional change processes underpinning Lcie. It is beyond the scope of this study to cover all facets of the external environment and the institutional context in which Lcie has been developed. By choosing the areas of focus, the emphasis is on the exogenous and endogenous factors which, taken together, exert a synergistic effect on the transactional change processes throughout the institution and thereby have a considerable influence on both the possibility and the effectiveness of Lcie implementation.

3.2.1 External environment

The regional context. KU Leuven (hereafter referred to as the University) is located in the city of Leuven, the capital of the province of Flemish Brabant in the region of Flanders, i.e., the Northern part of Belgium where Dutch is an official language. Flanders is distinguished by its concerted effort to foster research, innovation, and high-tech entrepreneurship. In turn, Smart Hub Flemish Brabant, i.e., an official designation for a concentration of tech clusters in the province of Flemish Brabant, has acquired a reputation as a unique knowledge region in Belgium. Fifty-six per cent of the population works in innovative companies specialized in science and technology mainly concentrated in five clusters or Smart Hubs focused on health, food, logistics, cleantech, media and creative industry (*Smart Hub Flemish Brabant* 2019). By fostering collaboration between industry and knowledge institutions and further, through the connected cluster activities, the Smart Hubs have become driving forces behind the economic development, innovation cooperation and entrepreneurship in the region.

Another important innovation-driving factor is a solid regional base for scientific research and technology transfer. Along with many research and development platforms and scientific institutes, there are four strategic research centres in Flanders: IMEC (founded in 1984), VITO (founded in 1991), VIB (founded in 1996), and Flanders Make (founded in 2014). IMEC, the Interuniversity MicroElectronics Centre, is a world-renowned research and innovation hub in nanoelectronics and nanotechnology. In 2016, IMEC joined forces with iMinds, the digital innovation research centre. Today, IMEC brings together more than 4000 researchers from over 85 nationalities and 546-million-euro revenue (P&L) in 2017 (*IMEC Press release* 2018). VITO, the Flemish Institute for Applied Technological Research, as an independent multidisciplinary research centre, conducts research in the field of cleantech and sustainable development. VIB, the Flemish Interuniversity Institute for Biotechnology, fosters innovation and research in life sciences and biotechnology. Flanders Make focuses on production technology and processes to strengthen the manufacturing industry in Flanders. Together with Flemish HEIs, the KU Leuven Association and Leuven Research & Development (LRD) – the latter will be addressed later in this chapter - these research establishments are among the primary shapers of the regional innovation context, renowned for its excellence in research and technology transfer.

In addition to fostering and maintaining research excellence and technology-transfer capacity, the region attaches great importance to advancing entrepreneurship. For example, PMV, the Flemish investment company, contributes to entrepreneurship and innovation by giving financial support to promising businesses as well as by implementing relevant projects in collaboration with the government and other partners. As indicated by Organization for Economic Cooperation and Development (OECD), PMV "manages the Transformation and Innovation Acceleration Fund (TINA), with a budget of USD 235 million PPP (EUR 200 million) since 2010, which provides risk capital financing for innovation projects and acts as "entrepreneur" and "facilitator"(OECD, 2016: 2). Another example might be Flanders DC or Flanders District of Creativity. Being a non-profit organization, Flanders DC provides advice to creative entrepreneurs and thereby significantly fosters entrepreneurial activities in the creative sector.

In line with this emphasis on entrepreneurship, much is done to stimulate entrepreneurial education in Flanders. In 2015, Flanders launched the Action Plan for Entrepreneurship Education 2015-2019 (OECD, 2016). The Action Plan aims to enhance entrepreneurial spirit among young people and adults through education as well as to prepare students for self-employment. Furthermore, the Action Plan highlights the need to provide training to teachers in order to help them develop a positive attitude towards entrepreneurship and self-employment (*Education, Audiovisual and Culture Executive Agency (EACEA)* 2018). It is essential to add here that the province of Flemish Brabant has been providing financial support to Lcie from the start of this initiative, thereby playing a substantial role in fostering entrepreneurship education in the region and beyond.

In summary, the regional context – with its innovative Smart Hubs, its strategic research centres as well as research-, innovation- and entrepreneurship-friendly infrastructure – develops and shapes the environment that provides impulses and opportunities for innovative projects and initiatives. Furthermore, the Flemish government structures its key relationship with higher education institutions (HEIs) around autonomy and quality assurance, and thereby creates conditions for advancing innovation and entrepreneurship in the higher education sector.

The relationship between HEIs and the regional government. With the establishment of the federal state in Belgium in 1989, Flanders is in charge of its own higher education

system (De Wit & De Boer, 2010; Broucker & De Wit, 2013). From this time onwards, deregulation, autonomy and quality assurance have essentially shaped relations between HEIs and state authorities in Flanders (Bellefroid & Elen, 2003; De Wit & De Boer, 2010).

Thus, in the early 1990s, significant autonomy was given to the former state-organized and state-funded universities (e.g., De Wit & Verhoeven, 2004; Broucker & De Wit, 2013). The latter are not established by the government, so they are known as 'private' universities (Broucker & De Wit, 2013) or 'free' universities (European University Association (EUA), 2017). Overall, as illustrated below, Flemish HEIs exercise autonomy along the main dimensions highlighted in the Lisbon Declaration: academic autonomy (curricula, programmes, and research), financial autonomy (lump-sum budgeting), organizational autonomy (university structure), and staffing autonomy (responsibility for recruitment, salaries, and promotion) (EUA, 2007: 6).

From the perspective of academic autonomy, Flemish universities are free to make decisions over curriculum development following the abolishment of 'legal degrees' and 'scientific degrees' (Broucker & De Wit, 2013). The differentiation between 'legal degrees' and 'scientific degrees' was introduced in the 19th century. For 'legal degrees', the required educational content was prescribed by the legislation. Accordingly, those who have legal degrees could be appointed in public offices or practise certain professions (e.g., a physician or notary) without the obligation to pass further exams - a Commission established by the government ratified these degrees (Broucker & De Wit, 2013). For 'scientific degrees', universities were allowed to define the educational content themselves. From 1991 onwards, all degrees awarded by universities have been 'academic degrees' (Broucker & De Wit, 2013), and there are no constraints on the content of degree programmes (EUA, 2017).

It is essential to discuss a new funding system for universities established in 2008. Previously, universities were funded on the basis of historical costs and the number of enrolled students (Broucker & De Wit, 2013). The new funding model is largely output-oriented, being premised upon the following components: a fixed amount, which depends on the size and the profile of an institution; a variable teaching-related amount determined by the number of enrolled students (input financing) and the number of awarded credits and degrees (output financing); and a variable research-related amount (only for universities) determined by research output indicators, e.g. the number of awarded PhD degrees, the quantity of academic

publications and citations (De Wit, 2018; De Wit & De Boer, 2010; Broucker & De Wit, 2013). Within this framework, Flemish universities receive an annual block grant which is adjusted each year based on input and output indicators for education and research (EUA, 2017). Only a few sums are designated for a particular purpose, e.g., for social facilities for students, and there is a small number of spending rules, e.g., the percentage of the total amount that can be used for staff salaries (Broucker & De Wit, 2013). Another source of finance can come from contract activities (De Wit, 2006). These activities, among others, are regulated by legislation to ensure that intellectual property rights are protected, and universities get fair profit sharing (Broucker & De Wit, 2013).

Concerning organizational matters, universities in Flanders have considerable autonomy in setting their governance system (De Wit, 2018). For example, the two 'free' universities, i.e., KU Leuven and Vrije Universiteit Brussel (VUB), determine the size and composition of their governing bodies themselves; these universities are allowed to choose and appoint their external board members (EUA, 2017). Admittedly, the boards of all universities include a Government Commissioner who has no voting rights but exercises advisory function to ensure that universities make decisions in compliance with government regulations and maintain financial sustainability (EUA, 2017). From the perspective of the common principles underpinning governance of Flemish HEIs, it is essential to highlight collegiality in policy-making (De Wit, 2013). Thus, faculty members, administrative staff, and students play an active role in developing institutional policy. Policy makers and respective bodies are elected by all internal stakeholders - including students.

Lastly, in terms of staffing autonomy, Flemish HEIs have the freedom to hire staff, although within a legal framework that determines the teaching grades, the wages and the percentage of government funding allocated for salaries, i.e., 80% of the operating grant (De Wit, 2018). Overall, HEIs in Flanders can make autonomous decisions regarding recruitment and selection policy, dismissals, promotions and salary allocation (EUA, 2017).

In summary, Flemish universities are largely autonomous institutions. As indicated by De Wit (2018), the government establishes the basic framework in which universities are allowed to operate autonomously – that is, the framework determines formal requirements e.g., the length of study, the study areas but the content of study programs and courses is determined by universities themselves (De Wit, 2018). Essentially, by granting significant autonomy to

HEIs, the Flemish government makes universities accountable through quality assurance mechanisms.

Since the time Flanders became autonomous in organizing its HE system, quality assurance of higher education has taken centre stage (De Wit & Verhoeven, 2004; De Wit, 2017). Fumasoli, Gornitzka and Maassen (2014) note in this respect:

> Autonomy and accountability are relational – they concern how universities relate to their environment, to state authorities, their "constituencies" and the wider society. Just as autonomy is multimodal, accountability relationships take several shapes: bureaucratic, legal, political, or professional (Fumasoli, Gornitzka & Maassen, 2014: 6-7).

In Flanders, the accountability relationships between the government and HEIs rest essentially on trust. In effect, with a move from programme evaluation to institutional review in 2015, the government made HEIs responsible for the quality of education they provide, whereby Flemish HEIs received the opportunity to develop their own quality assurance (QA) systems (De Wit, 2018).

Consistent with the new QA model which will be introduced in phases, Flemish HEIs are not required to match their academic programmes with external quality standards. From this emphasis, the focus of the external review is on the internal model of quality assurance and quality of the education policy respectively. Overall, the institutional review system is grounded in the 'appreciative approach.' To quote De Wit (2017):

> The review takes as its starting point the QA model that the institution itself has developed. The review does not question the choice of the model – and in this sense, appreciates the efforts of the institution in developing such a model – but evaluates whether the model works to ensure the quality of the study programs or not (De Wit, 2017: 77).

In this context it is worth mentioning the method for internal quality assurance developed by KU Leuven - the COBRA model – where COBRA stands for Cooperation, Reflection, and Action with attention to Checks and Balances (see Quality Assurance Portal of KU Leuven,

2019). On the whole, the Model assigns responsibility for the quality of education to the study programs. At the same time, the Model enables the University to develop and improve the quality of education on an ongoing basis. It is beyond the scope of this study to provide an overview of the COBRA model. For the purposes of this research, however, it is important to underscore the point that the QA system elaborated by KU Leuven generates, in Laloux's (2014) terms, "the energy of trust," thus being in line with the overall approach to quality assurance in higher education in Flanders.

From the above, it follows that the regional context plays a significant role in stimulating innovation, entrepreneurship and related change in higher education institutions, in fact, not only by promoting innovation cooperation and sustaining efficient research infrastructure but also through decentralization of control over the education sector and the focus on quality assurance.

The next section delineates the essential characteristics of the institutional context in which Lcie has been developed.

3.2.2 Institutional context

3.2.2.1 The University history and profile

KU Leuven belongs to the flagship universities in Europe. Fumasoli, Gornitzka and Maassen (2014) identify the common characteristics of the European flagship universities as follows: "they are all comprehensive, old and traditional institutions, they are public, they are large (at least relatively within their own national higher education system), and they are all located in major urban areas of their country" (Fumasoli, Gornitzka & Maassen, 2014: 11).

KU Leuven exhibits these features being an ancient, traditional, large comprehensive university. Founded in 1425, the University has a rich and renowned history. Many internationally famous scholars lectured here and made valuable contributions to European culture, including Desiderius Erasmus, Justus Lipsius, and Andreas Vesalius. In 1968, the University split into the French-speaking Université catholique de Louvain and the Dutch-speaking Katholieke Universiteit Leuven. The former moved to the newly built campus in Louvain-la-Neuve, whereas the latter remained in the historic town of Leuven (De Boer,

2013). In late 2011, the name of the University was changed from ‘Katholieke Universiteit Leuven’ to ‘KU Leuven’.

KU Leuven is one of the largest universities in Europe. The KU Leuven Association links five university colleges across Flanders and Brussels with the KU Leuven. The Association enrols more than 100,000 students, thus, accounting for 43% of the entire student population in Flemish higher education. In the academic year 2017-18, KU Leuven played host to10,275 international students representing 163 different nationalities. Overall, KU Leuven and its academic hospitals employ 20,524 people (*KU Leuven* 2018).

KU Leuven is one of the leading European research universities carrying out fundamental and applied research. In 2017, the University’s research expenditure was 475 million euros. The patent portfolio of the University currently includes 586 active families, each of them representing an invention protected in multiple countries. The University ranks sixth within the European Commission’s Horizon 2020 Research and Innovation programme, with 238 approved projects. Since the establishment of the European Research Council (ERC) in 2007, over a hundred grants provided by ERC have involved KU Leuven researchers. Overall, the University’s total research output consistently ranks among the European top.

KU Leuven is part of prestigious university networks including the League of European Research Universities (LERU, established in 2002) and the Coimbra Group (established in 1985). As a founding member of the LERU network that brings together twenty-three leading research-intensive universities, KU Leuven essentially influences research and higher education policy in Europe (*League of European Research Universities* 2019). As a member of the Coimbra Group, an association of long-established and reputable multidisciplinary universities in Europe, KU Leuven makes a significant contribution to strengthening the international collaboration among academic institutions as well as to enhancing excellence in learning, teaching, and research also through the exchange of good practices (*Coimbra Group* 2019).

Overall, according to the major international rankings, the University is among the best hundred universities in the world. The University is currently ranked 48th in *The Times Higher Education World University Ranking* (2019), and 81st according to *the QS World University*

Rankings (2019). In 2016, 2017 and 2018 Reuters named KU Leuven the most innovative university in Europe (*Reuters* 2018).

KU Leuven has become well-known for a range of important, historically determined strengths. Two of them are particularly relevant to highlight in the framework of this study, namely, a long-established tradition of advancing innovation and entrepreneurship and a substantial history of students' engagement in the University's decision making.

A long-established tradition of advancing innovation and entrepreneurship. It is noteworthy that in the late 1940s, Professor Pieter De Somer, a future Rector of KU Leuven, founded a pharmaceutical industrial company RIT in Genval/Rixensart. In 1954, the establishment of RIT made possible the foundation of a research institute (called 'Rega') in Leuven. The new institute acquired international eminence in the field of antibiotics, and later, vaccine and interferon research (De Clercq, 2004). In 1972, the University established Leuven Research & Development (LRD), the first technology transfer office in Europe. As a driver for regional development and innovation, LRD efficiently collaborates with industry through a wide array of mechanisms including the facilitation of cooperative and contract research, the creation of spin-offs companies as well as by managing intellectual property and setting up science parks and incubators. Furthermore, LRD has been involved in the creation of specialized network organizations, for example, Leuven.Inc (Leuven Innovation Networking Circle). Founded in 1999, Leuven.Inc is a non-profit, 600-member network organization that provides a strong communication platform by building a bridge between knowledge centres, entrepreneurs, academia, industrial enterprises, and their socio-economic partners. Since 2017, Leuven.Inc joined forces with Leuven MindGate. Founded in 2016, Leuven MindGate sustains cooperation between 29 leading knowledge institutions, companies, and the city of Leuven. Over time, the University has created different models for collaboration between academia and industry along with a strong support system for fostering innovation and entrepreneurship. Not surprisingly, "KU Leuven ranks among the world's most productive universities in technology transfer. Between 2005 and 2014, industry contracts, licensing and patents generated nearly €1.4 billion in revenue for the university. The university also has nurtured and taken a stake in 105 spin-outs, that raised €675 million in external capital over the past decade, including seven initial public offerings. Eighty-seven spin-outs are still active employing some 4,200 people" (Edmondson, 2015: 7).

At this juncture, it is important to highlight a distinctive decision and incentive mechanism that has been developed within the University structure (LRD brochure, 2017). Researchers can create LRD research divisions, through which they can autonomously manage their technology transfer activities with overall support provided. As Professor Koen Debackere, the Managing Director of KU Leuven, explains:

> The divisions are organized on an interdepartmental basis, and professors of research become members of one of those divisions, under which they can organize their industrial involvement. Any proceeds from their work can remain within the division. What drives them is to be a part of a strong research environment where they can compete and collaborate with the best of their colleagues. In order to do that the university lets them reinvest the income in the infrastructure, equipment and post-doctoral students – in building a strong research environment in the university (Debackere, 2008: 82-83).

Overall, LRD research divisions encourage interdisciplinary collaboration across faculties and departments and thereby significantly foster innovation and entrepreneurship combined with high-level research and education.

A substantial history of students' engagement in the university decision making. Over the years, KU Leuven has evolved in a student-driven University. Students provide a significant influence on education being represented at all levels, ranging from the management board to study program committees (De Wit, 2018). There are more than 30 representatives in 15 councils (education, academic, cultural, student services, etc.). Furthermore, students impact on decision-making through various types of student organizations. Some student organizations are linked to Faculties (e.g., Faculty of Economics and Business, Faculty of Engineering Science). Others are set around certain themes (e.g., renewable energy). On the whole, the major student organizations at KU Leuven are Stura and LOKO. Operating at the University level, Stura - the Student Council KU Leuven - defends students' interests in various governing bodies particularly with regards to educational matters. For example, a representative of the Student Council works on the Education and Examination Regulations, considers the study process, contributes to the University's policy on education and reflects on the international policy to ensure diversity

within the University community. Representatives of the Student Council are official members of all governing bodies of the University, e.g., the Board of Governors, Academic Council and Executive Board. LOKO - KU Leuven's umbrella student organization - is also known as 'Campus Council Leuven'. Notably, in Belgium students are included in all bodies that determine the University and country-wide policies concerning higher education. In Leuven, it is LOKO that represents the University's students (and student unions) in all policy-making organs making decisions on issues related to social affairs and education. Besides, there are different types of student organizations, e.g., Faculty-specific student organizations, free student organizations dealing with specific topics (e.g., politics). Furthermore, the University has more than twenty international student associations. Overall, students shape and influence the educational landscape of the University in powerful ways – a solid tradition of the University.

In summary, while one of the oldest European universities, KU Leuven is deeply rooted in tradition. At the same time, KU Leuven distinguishes itself as an innovative and entrepreneurial University which has created the environment for nurturing and fostering new ideas. In effect, the entrepreneurial character of the University essentially determines how the University goes about handling relevant initiatives and emergent change processes respectively. One senior leader put that very succinctly:

> KU Leuven is distinguished by the history of being able to cope with initiatives which are not prescribed by regulations. On the one hand, KU Leuven is a conservative and traditional University. At the same time, the University is flexible, adaptive, innovative. There is a big room for innovative ideas and new initiatives (interview conducted by the researcher on March 20, 2017).

The sub-sections that follow address some key aspects of the University's mission, internal organization, governance structure and policy frameworks with the aim to enhance an understanding of how the internal context triggers transactional change initiatives including Lcie. Of note, the University's structure, systems, and management practices will be revisited in more detail in chapter 5 of this study.

3.2.2.2 Mission

As indicated by Dill (1997b):

> Mission … is best conceived not as a prose statement of aspirations but as a collection of strategic decisions that influence the relationship between an institution and its environment. The strategic decisions encompass the scale and scope of an institution, its geographical service area, the types of students to be served, and what has come to be called the "core competencies" of an institution. Finally, the concept of mission has often been associated with a statement of the essential values of the institution (Dill, 1997b: 172).

From this perspective, Dill (1997b) underscores the importance of differentiating between the mission that influences external publics and mission that gives direction to strategic choices of an institution. Importantly, the mission of KU Leuven is strategic in nature, being broadly consistent with the focal areas highlighted by Dill (1997b). The guiding principles and values underlying the University's mission statement entitled "Identity and mission of KU Leuven" (see Appendix 2) are summarized below.

As a comprehensive, research-intensive university, KU Leuven is committed to excellence in education and research. Accordingly, the University offers its students inter- and multidisciplinary study programmes based on high-level research. Furthermore, the University makes every effort to prepare its students for assuming their social responsibilities. Being internationally-oriented, the University is actively engaged in collaboration with research partners at home and abroad.

According to its mission statement, the University encourages personal initiative and critical reflection in a culture of exchange of ideas, cooperation, solidarity, and academic freedom. It pursues a proactive diversity policy for its students and staff. As the mission statement indicates, the University is actively engaged in public and cultural debates striving for the advancement of the knowledge-based society. Furthermore, "the University puts its expertise to the service of society, with particular consideration for its most vulnerable members" (see Appendix 2). Being committed to social responsibility and having strong scientific expertise, the University provides high-quality, comprehensive health care in its University Hospitals.

Therefore, the mission statement of the University specifies the core competencies and values of the institution or as Shirley (1983) put it, "the fundamental purposes and guiding principles for behaviour" (Shirley, 1983: 94). In turn, the core purposes, values, and principles are translated into the internal organization and governance system outlined in the following paragraphs.

3.2.2.3 Organization and governance system

KU Leuven is comprised of three major entities: the University itself which runs academic and research activities; KU Leuven Research & Development (LRD) with its technology transfer, spin-offs, etc. activities, and KU Leuven University Hospitals which perform clinical duties. Essentially, LRD and the Leuven University Hospitals have statutory and operational autonomy while being well incorporated in the overall organizational structure. On the whole, KU Leuven has developed a "full matrix-like structure" (Debackere, 2008: 80) that reflects its primary purposes, entrepreneurial character, values, and traditions.

Within the organization structure, the University itself spans fifteen Faculties and Departments which are organized into three 'overarching' Groups: the Humanities and Social Sciences Group (7 Faculties); the Science, Engineering and Technology Group (5 Faculties); and the Biomedical Sciences Group (3 Faculties). Each Group has a doctoral school. The Group structure coordinates activities across Faculties and Departments where Faculties are organizing entities responsible for education, and the Departments function as organizing entities responsible for research and scientific services. Of note, in the Humanities and Social Sciences Group, research units are subdivisions of the Faculties; in the other two Groups Faculties have a similar status with Departments (De Boer, 2013). Overall, there is no hierarchy within the Groups, so that the Faculties and Departments work side by side (Akerman, 2014). Further, Faculties and Departments exercise significant autonomy within the Group structure. For example, the "Self-evaluation Report, Faculty of Engineering Science KU Leuven" (2015) states:

> The Faculty of Engineering Science autonomously develops its vision, mission, and strategy, which must be consistent with the KU Leuven global strategy. In the same way, Educational Committees have autonomy over their program, as long as they adhere to the framework set by the Faculty and the University (Self-evaluation Report, Faculty of Engineering Science KU Leuven, 2015: 6).

Essentially, Faculties and Departments operate as independent financial units within a group (De Boer, 2013) being free to decide how to spend their budget which is allocated to them within the group funding model. Notably, in addition to Faculties, Departments and other subdivisions, there are intergroup/interuniversity institutes supported by each of the Group.

Alongside the Groups, the University has developed a horizontal structure with research divisions under the auspices of LRD. As described earlier, the research divisions act in an interdepartmental manner and create powerful contexts for research and innovation in this organizational setting.

The internal organizational pattern of KU Leuven essentially determines its governance structure. Thus, there are separate governance structures for the University itself, the Leuven University Hospitals, LRD as well as for the KU Leuven Kulak Kortrijk Campus (De Boer, 2013). For the purposes of this research, the focus is on the governance structure and decision -making bodies of the University outlined below.

The University's governance structure is determined by the Statutory regulations of KU Leuven (see Appendix 3). The internal regulations for Groups, Faculties and Departments lay down further details on structures, responsibilities, etc. As shown in the figure below, there are basically five levels in the University's governance structure: (1) the Board of Trustees; (2) the Board of Governors and the Academic Council; (3) the Joint Executive Board - the University's daily management level; (4) the Group-level – Faculties and Departments clustered together for the purpose of facilitating collaboration between them; and (5) the Faculty and Department level (see Figure 2).

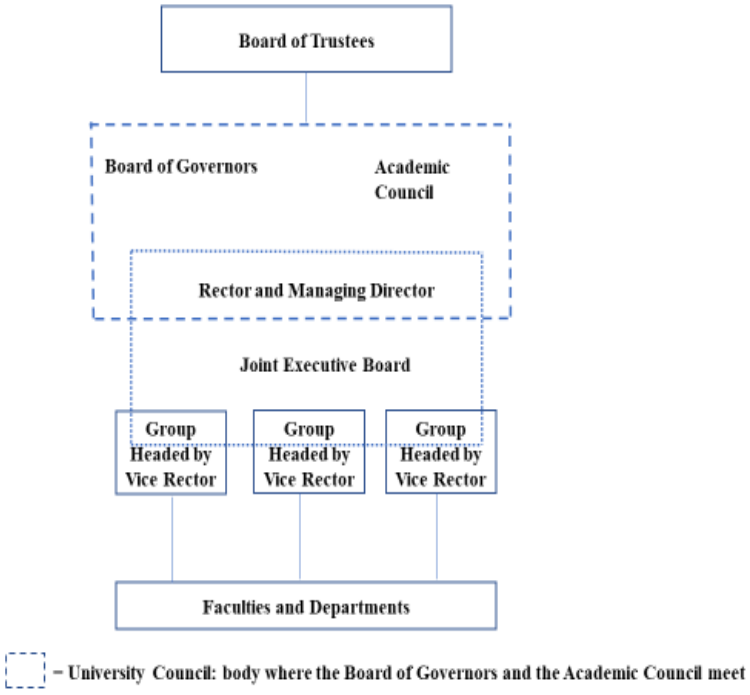


Figure 2. The governance structure of KU Leuven at the central level. Adapted from De Boer (2013: 12).

It is important to emphasize that the University's governance is arranged in a way that different organization levels are linked to each other – for instance, the Joint Executive Board includes, among others, the Rector, the Managing Director and Vice-Rectors who are heads of the groups (De Boer, 2013). Furthermore, the governance structure embraces all staff categories within the University and society at large with the aim to engage internal and external stakeholders in the university policymaking. In this framework, the general policy guidelines are developed at the central level. However, since there are numerous bodies representing Faculties and Departments at the central level, the guidelines result from extensive discussions, i.e., they do not come top down. Instead, the decision-making process unfolds 'bottom-up' (with students playing an essential role) - that is, from Faculty or Department to the Group, to the Executive Board and the Academic Council. However, the flow of decision-making can differ with regards to a particular area, e.g., education, research or internationalization. For in addition to the above-mentioned governance bodies there are various advisory bodies at the central level, e.g., Education Council, Research Council, etc. (De Boer, 2013).

As follows from the above, the University's model of the internal organization and governance system exhibits features of "centralized decentralization" (Clark, 1998) maintaining equilibrium between the central policy setting and decentralized implementation within a matrix-like organization structure. In effect, this model essentially shapes the entrepreneurial character of the University which has a substantial impact on the transactional change processes within the University system. The internal change dynamics is further advanced by the University's policy frameworks, described next.

3.2.2.4 Policy frameworks

At the most fundamental level, the policy frameworks developed by the University are determined by the institutional mission and vision for education. The specifics of the approach to education policy development underpinned by the institutional mission and vision as well as the essentials of the University's policy agenda are delineated below.

Approach to education policy development. The University's vision on education and the related policy were established by the method of appreciative inquiry. The general outline of appreciative inquiry (AI) has been provided in the proceeding chapter. This sub-section gets down to the essentials of the inquiry process conducted by the University. In so doing, the study aims to spotlight the fundamental principles and core values underpinning the University's approach to the education policy development that provide a significant impact on the transactional change dynamics in this academic setting.

Following the 4-D model of AI (Bushe, 2011), the University structured the inquiry process around four phases: **discover** the best over what is and what makes it that way, **dream** what could be the vision for the future, **design** a plan to realize the vision based on best practice, and **deliver** on what will make the plan sustainable (see Figure 3).

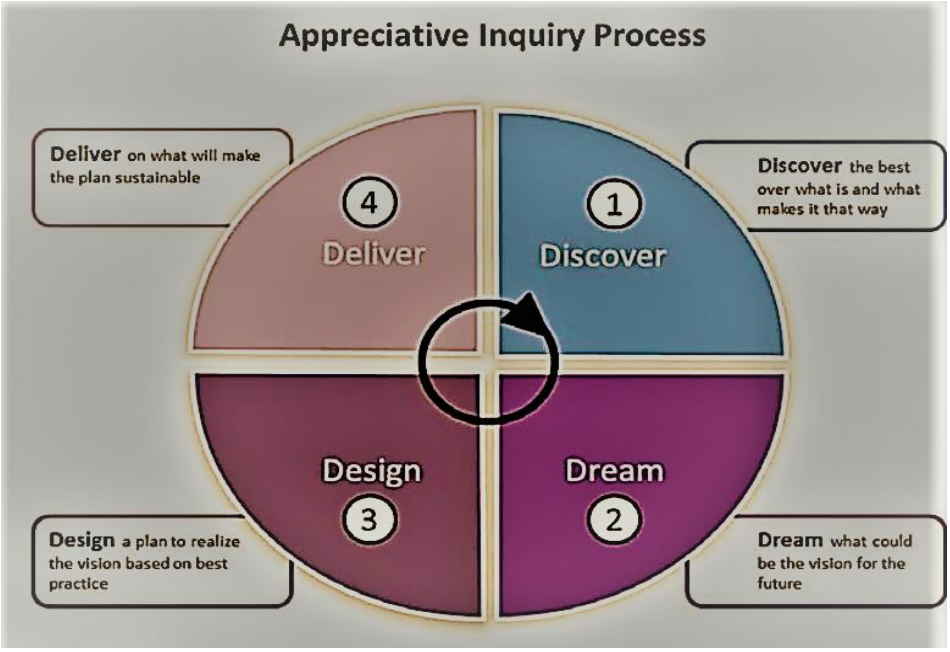


Figure 3. Appreciative inquiry process at KU Leuven. Adopted from Gosselink and Pollefeyt (2014: 5).

The above phases of the inquiry process are briefly elaborated upon below.

Phase 1: Discovery. By taking the mission statement as a starting point for discovering 'the best over what is and what makes it that way', the Vision and Policy Plan underscores the point that the University is active in research, education, and service to society while striving for international excellence in each of these domains. From this perspective, the Vision and Policy Plan stresses two essential characteristics of the University reflected in the mission statement: the culture of dialogue and attention to the individual.

Phase 2: Dream (consideration). The University's vision on education developed during the second phase of the collective inquiry process is rooted in the basics of the institutional mission statement. The vision is centred around the concept of 'future self,' i.e., the students' motivational picture of the future. Underpinned by social constructivism, more precisely, by social personalism theory characteristic of the philosophical and ideological background of the University, the 'future self' concept relates to the future identities which individuals project onto themselves, i.e. whom they would like to be or believe that will be able to become (Gosselink & Pollefeyt, 2014). The 'future self' concept is extended through the 'the disciplinary future self' perspective, i.e., the disciplinary image of the future that students develop by choosing a field of study. This way, education triggers students to think about

their future identities, thereby fostering their personal development and further, the contribution of individual students to society. Importantly, the vision on education and learning with its focus on the 'disciplinary future self' encourages the University "to investigate how to organize education and research so that they might reinforce each other in interaction" (Gosselink & Pollefeyt, 2014: 17). On the whole, the Discovery and the Dream (consideration) phases create the ground for the implementation dynamism for education addressed in the Design phase.

Phase 3: Design. The vision delineated above necessitates a particular dynamic of implementation for education as well as for the realization of the basic conditions for studying. For the purposes of this research, it is important to highlight continuous, University-wide communication that forms the core of the implementation dynamism for education (see Figure 4).

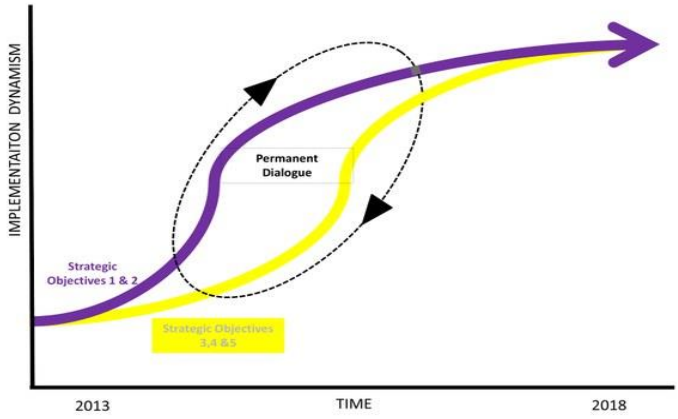


Figure 4. Implementation dynamism for education at KU Leuven. Adopted from Gosselink and Pollefeyt (2014: 26).

A continuous, committed dialogue underpinning the implementation dynamism for education is reinforced by the principles of 'inspiration' and 'anchoring'. The University illuminates these concepts as follows:

> Under inspiration, we can distinguish the different ways in which internal and external actors take the initiative on policy formation. We also count on the informal exchange of good practices during a survey as well as thinking together about a problem. Such an exchange can provide an impetus for developing a good local practice at another organizational level. By anchoring, we mean first and foremost the formalization of an

> initiative, a project or a broader policy line. At KU Leuven, this anchoring is often given the form of policy frameworks… (Kritische reflectie, 2016: 39-40).

The principles of 'inspiration' and 'anchoring' and their role in fostering transactional change in this organization setting will be explored at a later point in this study. Now, it is pertinent to note that the appreciative approach to policy-making fosters inspiration and ensures space for anchoring of relevant ideas and initiatives, also, by giving study programmes full trust and freedom needed to implement discipline-specific content of their vision (Gosselink & Pollefeyt, 2014).

Phase 4: Delivery. During this phase of the inquiry process, the focus is given to the University's strategic and operational objectives as well as action steps for the policy period 2014-2017. The strategic goals include, among others, the further development of the University's vision in dialogue, the creation of powerful study trajectories, the advancement of appreciation for education, the strengthening of a culture of quality and the continuous improvement of 'life at KU Leuven.' Among the operational objectives, for purposes of this research, it is important to highlight the focus on the development and the expansion of university-wide entrepreneurship education (Gosselink & Pollefeyt, 2014).

In summary, the University's approach to education policy development is built around the organization strengths, social responsibility, individual freedom, the principles of 'inspiration' and 'anchoring' and the power of trust. By engaging the whole system in permanent dialogue and encouraging participation in policy development, the joint appreciative inquiry provides a solid foundation for the involvement of all stakeholders in the implementation of the policy agenda.

Policy agenda. As stated by Van Vught (1997), "the policies of a higher education institution are the prime reflections of the strategic choices that institution wants to make" (Van Vught, 1999: 400). The strategic choices underpinning the University's Strategic Plan presented by the new Rector and his team – Professor Luc Sels, the new Rector of KU Leuven, took office on August 1, 2017 - embrace several policy domains. The Plan entitled "On crossroads, for a sustainable society" is not determined by the timeframe and incorporates five long-term projects that strategically prioritize the focal areas as follows: (1) Truly International - the transition from a national University with a global reputation to a

truly international University; (2) Future-Oriented Education – the choice for a future-oriented teaching model focused on activating education and creating the efficient educational environment supported by a reform of the academic calendar; (3) Going digital – the advancement of educational technology in a way that facilitates collaborative learning, multi-campus education as well as broadens the international outreach; (4) Interdisciplinarity – the development of an interdisciplinary dialogue (in addition to disciplinary depth) in education, research, and public outreach; the Plan offers various interdisciplinary initiatives with the goal to create more possibilities for collaboration across Departments, Faculties and Groups; (5) Sustainability – the choice for sustainable management and a commitment to the Sustainable Development Goals in research and education (*On crossroads, for a sustainable society* 2018).

Importantly, future-oriented education is highlighted as one of the strategic focus areas within the overarching policy agenda of the University. Furthermore, the new Vice-Rector for Educational Policy is also responsible for innovation and entrepreneurship. Fostering entrepreneurial education therefore stays high on the University's policy agenda.

In summary, it follows from the above that the institutional purpose, priorities, internal organization, governance structure, and policy frameworks are aligned with the entrepreneurial character of the University. Accordingly, the organizational context empowers organizational members to come up with new ideas and initiatives that become triggers for transactional change processes throughout the University.

The next section provides an overview of a University-wide transactional change initiative - Leuven Community for Innovation driven Entrepreneurship (Lcie).

3.3 Leuven Community for Innovation driven Entrepreneurship: An overview

On the whole, Lcie evolved gradually, in phases, broadly like those described by Huisman, Boezerooij and Van der Wende (2007) as: "pre-initiation and initiation, in which activities are mainly bottom-up experiences; implementation in which a more strategic approach is developed; and institutionalization, in which the change becomes institutionalized and becomes an integral part of the core processes in higher education institutions" (Huisman, Boezerooij & Van der Wende, 2007: 314). In what follows, the study addresses the main phases of Lcie implementation with the focus on its rationale, challenges, implementation

strategy, and major outcomes. One should note, however, that Lcie did not unfold linearly, i.e., moving from one phase to another. Rather, it was a dynamic process in which a wide variety of activities occurred in iteration but not sequentially.

Pre-initiation and initiation phase. The Leuven Community for Innovation driven Entrepreneurship (Lcie) started as a concept approximately in 2012. The conceptualization of the initiative was driven by the relevant developments in the changing societal context in which entrepreneurship and commercialization of research have become increasingly important. Furthermore, the threefold mission of research-intensive universities, i.e., teaching, research and service to the community, "provides an excellent starting point for nourishing an entrepreneurial culture: research stimulating experimentation, education as developing human talent, and the application of this to tackle business and societal challenges" (Fyen *et al*., 2019: 16). Being aware of these dynamics and the evolving role of HEIs respectively, the University started thinking about how to create a University-wide structure in order to develop and advance entrepreneurial skills, particularly, of undergraduate students; and more broadly, to promote an entrepreneurial attitude within the educational context. Thus, a confluence of factors including the evolving role of universities in a changing society, awareness about it at the university level and the drive from students, have resulted in the development of a University-wide transactional change initiative (Lcie) as a part of the University's long-term educational policy (Fyen, 2016).

It is important to note that the explicit long-term policy that centres around 'disciplinary future self,' future-oriented education and interdisciplinarity, is a powerful supportive factor for the Lcie initiative. The other promoting factor for this change effort may be seen in the innovation-friendly organization context in which new ideas and initiatives including Lcie can develop. From this perspective, it is particularly worthy of mention a strong technology transfer office (LRD) with its significant role in shaping the entrepreneurial culture within the academic community and a remarkable record of spin-off companies, the decentralized organizational structure and a well-established governance system. Notwithstanding that, there were inherent challenges in the task of implementing Lcie delineated below.

As indicated by Fyen, "a first challenge in setting up a framework was to make it inclusive, reaching students from all backgrounds, while still providing enough focus into each of the disciplines" (Fyen, 2016: 38). Indeed, entrepreneurship is mostly associated with economics

and business and less with other fields of study, e.g., with social sciences and humanities. Taking into account the size and the comprehensive nature of the University, it was a significant challenge to introduce entrepreneurship education to students across various fields of study.

Further, the implementation of Lcie was challenged by a complex, multidimensional organization structure in which Faculties are responsible for education; Departments focus on research although interwoven with Faculties; and the technology transfer office (LRD) deals with the exploitation of research thus being engaged in service to society. Within this structure, LRD has been given authority to set up Lcie as one of the key aspects of the implementation strategy that will be addressed later in this section. Since it is not the core mission of LRD to be involved in the education of students, it was a challenging endeavour for LRD to lead this change effort.

The other challenge relates to the high autonomy of Faculties, whereupon it is difficult to launch an initiative or to create a new structure which is not within a Faculty. Among the limiting factors are many regulations, intricate internal processes, and complex funding schemes, to highlight a few. Particularly, complex and often hidden mechanisms of money distribution over the Faculties inhibited the creation of a University-wide structure to foster education in entrepreneurship. In this framework, getting support from all Faculties was the major condition for initiating and sustaining this change initiative: without that, Lcie was unlikely to succeed. Initially, Lcie got much support from the Faculty of Business and Economics and some other Faculties. However, since the overall support for Lcie was not too high, the University was about to decide to stop the entire initiative.

Overall, the challenges and complexities around the implementation of Lcie pointed out difficulties that bear the signs of a "wicked problem," i.e., a multi-faceted problem "characterized by complex interactions, multiple causations and feedback loops, radical uncertainty of knowledge grounds, and contestation of facts, values, and norms. As a result, they do not lend themselves to consensual measurement, prediction, and control according to the established standards of disciplinary scientific expertise and traditional decision-making routines" (Van Poeck, Læssøe & Block, 2017: 2). In recognition of this, the University developed a strategic approach well-tailored to both the essentials of the Lcie initiative and the specifics of the organizational setting.

Implementation phase. It is essential to note at the outset that the implementation strategy of Lcie and respective management practices will be thoroughly discussed in Chapter 5 of this study focused on the presentation of research findings. This sub-section will confine itself to three key aspects of the implementation strategy based on the presumption that they essentially dynamized transactional change processes underpinning this effort: (1) the founding role of the technology transfer office (LRD) in setting up the Lcie initiative; (2) the involvement of students in the implementation process; and (3) a major shift in strategy by implementing Lcie, i.e., from a top-down to bottom-up approach.

Firstly, the Lcie initiative was set up by LRD that operates outside the Faculty structures being an independent but well-connected entity in the organizational setting. Accordingly, LRD was perceived by the academic community as a neutral party that launched a new university-wide initiative in which all Faculties were supposed to be involved. Further, as suggested by scholars and practitioners, it is essential to address the entrepreneurial education at the University level with the involvement of the technology transfer office as one of the important stakeholders. On the whole, LRD - with its more than forty years of experience in collaborating with a variety of faculty members, central and supporting staff (Fyen, 2016) - exercised a significant impact on the collective dynamics underlying the implementation of Lcie.

Secondly, students were given free rein to shape the Lcie initiative. As has been previously shown, the University is distinguished by a strong participatory culture of student organizations. Drawing on this tradition, the University approached students in the early stages of Lcie implementation. Notably, although the initiative was less than two years old, the student population reached through the various student bodies was extremely high, i.e., over 60% of the entire enrolled population (Fyen, 2016). Furthermore, there was a remarkable variety in backgrounds of the involved students who underscored the value of collaboration across disciplines. Therefore, Lcie was launched and implemented for students and with the active participation of students who acted as a driving force behind this initiative.

Thirdly, and related, in the course of the development of Lcie the University introduced a shift in strategy, i.e., from a top-down way of implementation to a bottom-up approach. Initially, Lcie was conceived as the Leuven Centre for Entrepreneurial Education. At some point, a conclusion was made that it was not the right name for this change effort. For the word

'centre' connotes centralization, or, to put it differently, the intent to take control over the initiative, and therefore, implicitly presupposes a top-down approach. In re-naming the initiative into **the Leuven Community** of Innovation driven Entrepreneurship, the University gave a clear sign to students that they will be in charge of this initiative, thereby, indicating a bottom-up approach to the implementation of Lcie.

Major outcomes. In about two years after the launch of the initiative, Lcie has developed into a university-wide 'brand' of student entrepreneurship supported by multiple and diverse stakeholders. The major outcomes achieved in just two years of operation are summarized by Fyen (2016) as follows: (i) the development of an efficient governance structure for Lcie as a dynamic network driven by personal engagement: (ii) the creation of a University-wide cross-disciplinary certificate for entrepreneurship; (iii) trying out new teaching formats focused on interdisciplinary problem-solving using design thinking; (iv) the development of specific coaching sessions for entrepreneurial students; (v) the establishment of a network of university facilities to support entrepreneurship, e.g., incubator spaces and creativity lab; (vi) the setup of 'JusStart', i.e. an educational initiative run by PhD law students aimed to provide legal support to student entrepreneurs; (vii) the setup of TechStart, i.e., an educational initiative conducted by PhD students from the Engineering Science Faculty offering technological advice to startups; (viii) the setup of 'ID-Start', i.e., an educational initiative focused on providing support to entrepreneurial students who are willing to foster creative skills encompassing marketing, communication, design and branding (Fyen, 2016: 41-43).

For the purposes of this study, it is worth highlighting the Lcie governance structure that involves the following key stakeholder groups: (a) a steering committee chaired by the Managing Director of the University – this body is involved in long-term strategic decision-making; (b) a workgroup 'Lcie academy' composed of an interdisciplinary group of professors who lecture on entrepreneurship – the group is involved in educational aspects of student entrepreneurship; and (c) 'Lcie student council' where students are engaged in discussions of curricular aspects of entrepreneurship, propose themes for collaboration while having the opportunity to talk about the relevant issues with university staff members. Notably, this format was inspired by purpose-driven companies described by Laloux (2014) as 'evolutionary' or 'Teal' organizations (see literature review chapter). Fyen (2016) notes in this respect that:

> This way of working allows for a specific type of intrapreneurial dynamics in the often complex structures of the organization. Moreover, the system allows a rapid buildup of human capital as the people involved share several common traits but at the same time form a diverse representation of the university population (Fyen, 2016: 41).

By way of summary, it is essential to reiterate the point that the results mentioned above were achieved by Lcie within the two years from the date of its initiation. Today, a dynamic community of students, researchers, professors, and alumni, established under the Lcie initiative, fosters and promotes entrepreneurial education across academic programmes and disciplines. Despite significant challenges therefore Lcie managed to generate transactional change processes within the KU Leuven Association that mobilized and energized the institution-as-system to create a University-wide structure for nurturing entrepreneurial mindset through learning and education.

3.4 Summary

This chapter provided an overview of the external environment and the institutional context in which the Lcie initiative was set up followed by the explanation of its rationale, implementation strategy and primary outcomes viewed through the lens of a phased approach. Both the contexts and the Lcie initiative were presented in a descriptive format with the aim to provide a detailed insight into the external and internal backgrounds to the case study initiative. At first, the defining characteristics of the regional environment were outlined with the emphasis on the region's remarkable capabilities in research and technology transfer as well as the contribution of the Flemish government to fostering innovation and entrepreneurial potential of the HE sector. Then the focus was given to the essential features of the University including its history and profile, the institutional mission, internal organization, governance structure, and policy frameworks. This approach allowed the researcher to unveil the contextual factors that had a strong relevance for initiating and sustaining this large-scale transactional change effort, particularly from the viewpoint of their synergetic influence on the transactional change processes underpinning the Lcie initiative.

The next chapter outlines the research design and methodology used in this study.

CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY

4. 1 Introduction

The proceeding chapter has served to lay out the broad issues of the University profile and the development of Leuven Community for Innovation driven Entrepreneurship (Lcie) as a transactional change initiative. This chapter – chapter 4 - outlines the research design of the study which aims at understanding the transactional change dynamics in universities as organizations. In particular, the study seeks to understand and explain the role of organizational structure, policy frameworks, management practices, and climate in enabling and sustaining change within a higher education institution (HEI), alongside the impacts of the antecedent factors on the transactional change process. To achieve the research goals, the study addresses the central research question (RQ) and associated sub-questions (SQ) as follows:

RQ: How does transactional change occur in universities as organizations?

SQ1: What antecedent factors promote or inhibit transactional change in this organizational context?
SQ2: How does organizational structure induce transactional change?
SQ3: How do policy and procedures relate to the organizational structure?
SQ4: What are the management practices through which transactional change occurs?
SQ5: What are the likely impacts of structure, policy frameworks, and management practices on the working climate?

The research questions outlined above ensue from an interactive design process (Maxwell, 2005). Thus, the key components of the research design, i.e., goals, theoretical framework, research questions, methods, and validity, create an integrated and interacting whole so that each component is essentially related to other components, rather than being connected linearly or in cycle sequence (Maxwell, 2005).

The chapter begins with an overview of the theoretical framework for this study. Next, the philosophical assumptions underpinning this research are discussed. Then the selection of the qualitative research methodology is explained followed by the review of data collection, participant selection, data analysis and validation of the study. Finally, the limitations of the research design and ethical considerations are presented.

4.2 Theoretical framework

At the general level, the theoretical approach taken here rests on the proposition of Maxwell (2005), who emphasizes the intrinsic relationship between research goals, the theoretical or conceptual framework, and research questions. As Maxwell (2005) points out, research questions should be interrelated with the goals of a study and should be informed by theoretical concepts and models that can be applied to the phenomena under investigation. Furthermore, the goals of a study should be permeated by current theory and knowledge, whereas the choice of theory and knowledge depends on the research goals and questions (Maxwell, 2005). Given this, the theoretical framework of this study, or in Maxwell's (2005) terms 'idea context', is rooted in: (a) organization theories in higher education, (b) theories of organizational change, and (c) the Burke-Litwin Model of Organizational Performance and Change. The current theory and knowledge in the fields of higher education and organizational change, as well as the Burke-Litwin model, have been discussed in the literature review chapter. The following are highlights from the previously considered theoretical knowledge and approaches (see literature review chapter) summarized with the intention to reiterate the intrinsic relationship between the goals, research questions, and conceptual underpinnings of this study.

(a) Organization theories in higher education give a framework for gaining insight into the specifics and the complexity of organizational functioning within an HEI. As Manning (2013) aptly notes:

> Higher education is a complex enterprise open to a wide range of understandings and interpretations. Its complexity is expressed in the types of institutions, environments pressures exerted, multiple and simultaneously occurring organizational structures, and numerous professional identities of its members. Those working in higher education can only make sense of its complexity by understanding and using a combination of theoretical perspectives through which to view their work (Manning, 2013: 19).

Accordingly, the study uses a multi-lens approach to provide a theoretical foundation, which is needed to develop a refined grasp of the distinctive features of higher education institutions and the likely impacts of these characteristics on the transactional change process. The focus of attention is on triggers for change in universities as organizations (Mintzberg, 1979;

Santos, Heitor & Caraca, 1998; Halász, 2010), along with the organization and culture of higher education institutions (Duderstadt, 2000; Kezar, 2001; Torraco, Hoover & Knippelmeyer, 2005).

(b) Theories of organizational change frame the approach to conceptualizing the essential characteristics of a change phenomenon, including types of change (Bamford & Forrester, 2003; Cummings & Huse, 1989) and levels of change (Burke, 2014; Hackman, 2002). Additionally, the study discusses the categorical concepts of context, or *why* to change (Pettigrew, 1987, 1990; Armenakis & Bedeian, 1999; Capelli & Sherer, 1991; Wissema, 2009), content, or *what* to change (Barnett & Carroll, 1995; Devos & Buelens, 2003), and process, or *how* to change (Van de Ven & Poole, 1995; Burke, 2014). Overall, the study takes a multidimensional theoretical perspective on organizational change patterns and embodies practices to gain a better understanding of the origin and the dynamics of transactional change in organizations.

(c) The Burke-Litwin Model of Organizational Performance and Change (the Model) provides conceptual framing to thinking about organizations in a transformational-transactional way. Furthermore, the Model calls attention to organizational dimensions that are key to successful change and how to link these dimensions causally to reach the change goals (Burke & Litwin, 1992). From the transactional change perspective, the Model centres around organizational structure, policies and procedures, management practices, and climate as the main levers for transactional change in organizations. Following this line of thought, the study uses the Model as a heuristic tool to interpret and explain how organizational structure, policy frameworks, management practices, and climate facilitate the transactional change process within an HEI, both individually and through their interrelations. Overall, the transactional dimensions of the Burke-Litwin model form the basis for the central research question and associated sub-questions of this study.

In summary, the conceptual structure suggested by the Burke-Litwin model along with knowledge and ideas about universities as organizations and theories of organizational change provide a theoretical foundation for empirical observations in the framework of this study. At the same time, the approach taken here is akin to ‘relevant theorizing’ highlighted by Clark (1998) - meaning, theory cannot work towards existing as a one-size-fits-all theory to understanding university change; rather, the aim is to develop explanatory categories that

stretch across a set of institutions, thereby elucidating a plurality of cases without distorting their unique features (Clark, 1998).

In the following section, the study highlights the philosophical assumptions underpinning this research.

4.3 Philosophical assumptions

As indicated by Guba and Lincoln (1994), "questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways" (Guba & Lincoln, 1994: 105). The authors go on to claim that scholars must make ontological and epistemological assumptions based on binary choices. Consistent with the above, Toma (1997) underscores the point that from the ontological perspective, a researcher must either proceed on the premise that there is a single reality or absolute truth that can be discovered, or that reality and truth are constructed by individuals. Epistemologically, a scholar either believes in the possibility to be objective in searching for truth or assumes that any investigation is influenced by values (Toma, 1997).

Notably, the modern field of organizational research is characterized by paradigmatic diversity and exhibits variation in views featuring positivist, critical, phenomenological, constructivist, interpretative, feminist, and postmodern perspectives (Buchanan & Bryman, 2007). This study aims to understand the transactional (emergent) change dynamics in an HE setting by reflecting on perspectives of the research participants, as well as meanings they assign to events and situations. Therefore, the paradigm or the philosophical worldview that informs this research is interpretive in nature underpinned by a social constructivist perspective.

Interpretivism and social constructionism stem from an ontological premise that empirical reality is socially constructed (Orlikowski & Baroudi, 1991; Searle, 1995). The epistemological assumption is that it is only possible to gain knowledge of reality through social constructions, e.g., language, consciousness, shared meanings and other artefacts (Klein & Myers, 1999). The emphasis of interpretative research is therefore placed on understanding phenomena by interpreting the meaning of actions. From this perspective, Creswell (2014) points out that the subjective meanings are framed socially and historically, and are shaped by

interactions with others (thus, social constructivism), as well as by historical and cultural norms operating in individual lives. Accordingly, researchers' intent is to deconstruct or interpret the meanings that other people have about the world (Creswell, 2014). Overall, social constructivism is rooted in constructivism's relativism that presumes the existence of multiple, apprehensible and possibly conflicting social realities constructed by human intellects that may change with time because those who construct them become more knowledgeable and sophisticated (Guba & Lincoln, 1994).

The interpretive approach with a social constructionist orientation from which this research operates has led to the respective conceptualization of an organization. As indicated by Grunow (1995), "the conceptualization of organizations – if they are organized explicitly in the research process – is an important differentiating criterion for the detailed description and critical methodological consideration of the research design" (Grunow, 1995: 11). This study follows the conception of organization developed by Morgan (2011). From the ontological perspective, it is assumed that organizations can be viewed as multidimensional, socially constructed realities in which different dimensions can co-exist in complementary, conflicting, thus paradoxical ways (Morgan, 2011). The epistemological assumption is grounded in a relativist view of epistemology acknowledging the existence of different perspectives that can be combined or used dialectically for multiple different objectives (Morgan, 2011).

In summary, this research takes a constructivist, interpretive approach to guide the understanding of the transactional change dynamics in an HE setting. In this framework, an organization is conceptualized as a complex, socially constructed reality. Accordingly, understanding the complex nature of organizations "always requires an open and pluralistic approach based on the interplay of multiple perspectives" (Morgan, 2011: 476).

The next section aims to show how the theoretical and philosophical assumptions related to the topic of investigation affect the choice of research design and method.

4.4 Qualitative research methodology

Based on the epistemological and ontological premises outlined above, the study has adopted a qualitative research approach aiming to achieve a holistic and richly descriptive explanation of the transactional change phenomenon in universities as organizations. Notably, Bryman

(1989) suggests that qualitative and quantitative research constitute a different way of 'knowing', i.e., not just different approaches to data collection. Quantitative research is influenced by positivism and therefore applies scientific method to the study of people. On the contrary, qualitative research lays the focus on how people understand the nature of their social environment (Bryman, 1989). According to Bryman (1989), a major distinctive feature of a qualitative approach as compared to a quantitative one is strong attention to the perspectives of those being studied, i.e., not concerns of a researcher, as well as the emphasis on individuals' understandings as a basis for interpretations of observations.

Consistent with the above, this qualitative study strives to gain an understanding of the complex phenomenon of transactional change within an HEI by capturing the diverse perspectives of research participants, including senior university leadership, faculty members, administrative staff, students, and external stakeholders. In so doing, the study aims to follow carefully the process of meaning-making, i.e., not its outcome, with the focus on how people make sense of their experience (Merriam, 2009). On the whole, the intention is "to understand, as much as possible, the lived experience of those being studied" (Russ-Eft & Preskill, 2001: 148).

Creswell (2007) presents a comprehensive summary of the key characteristics of qualitative research. They include: *natural setting*, i.e., data are collected in the context under investigation; *researcher is key instrument* – researchers collect data themselves, i.e., they do not rely on instruments developed by other researchers; *multiple sources of data* (interviews, observations, etc.) rather than a single data source; *inductive data analysis* – researchers develop categories and themes from the "bottom-up" by organizing data more abstract units of information; *participants' meaning* matters most, i.e., researchers focus on the meaning that the participants hold about the issue, not on the meaning that a researcher brings to the research*; emergent design*, i.e., the research process is emergent, so that the initial plan for research may change after the researchers enter the field and begin the data collection; *theoretical lens,* i.e., theoretical orientation used by researchers to view their study; interpretive inquiry in which researchers interpret what they see, hear and understand; and *holistic account,* i.e., researchers strive to develop a complex picture of the issue under investigation bringing in multiple perspectives and taking account of the many factors involved in a situation (Creswell, 2007: 37-39). The key features of qualitative research

described above essentially characterize the mode of inquiry to research into the transactional change dynamics in universities as organizations.

In the next section, the choice of a case study strategy is justified and explained.

4.5 Case study research strategy

This research employs a case study research strategy within the qualitative research paradigm. The reasons behind the choice of this type of research are as follows. Firstly, a case study, as a research strategy, focuses on the dynamics present within single settings (Eisenhardt, 1989) with the aim to understand the case as much as possible. Accordingly, a case study strategy will allow the researcher to develop a comprehensive, holistic, and an in-depth understanding of the transactional change phenomenon within an HEI while addressing both the phenomenon and the context. To quote Punch (1998): "…the case study aims to understand the case in depth, and in its natural setting, recognizing its complexity and its context. It also has a holistic focus, aiming to preserve and understand the wholeness and unity of the case. Therefore, the case study is more a strategy than a method" (Punch, 1998: 150). Secondly, a case study approach has an advantage if a few studies have been conducted to explore the area of investigation. Given that relatively little is known about how transactional change emerges and evolves in universities as organizations, it is relevant to pursue a case study strategy to grasp the specifics of transactional change in an HE setting. Thirdly, much of the literature (e.g., Yin, 1981, 2003, 2009; Benbasat, Goldstein & Mead, 1987; Orlikowski & Baroudi, 1991; Tellis, 1997; Anrade, 2009) points to a particular usefulness of the case study strategy when a focus of research is on "how" and "why" questions rather than on "how much" and "how many". Taking into account the key features of case-based research, the case study strategy fits well with the purpose of this research.

It is noteworthy that case-based research can have various aims. For Eisenhardt (1989), case studies can be used to provide a description, test theory or generate theory. Yin (1981; 2003) differentiates between exploratory, descriptive and explanatory cases. Exploratory case studies focus mostly on "what" questions. Descriptive studies provide background information and a description of cases being studied. Explanatory case studies usually answer "how" or "why" research questions and "deal with operational links needing to be traced to over time, rather than mere frequencies or incidences" (Yin, 2003:7). Stake (1995) identifies three other types of case studies, i.e., intrinsic (when a researcher has an intrinsic interest in

the case rather than develop a theory or make generalizations across cases); instrumental (when case study is instrumental in gaining insights into an issue by exploring a particular case); and collective (when a group of cases is being explored).

The case study strategy underpinning this research is instrumental in nature. The goal is to enhance an understanding of the transactional (emergent) change dynamics in HEIs by conducting case-based research that can provide insights into how transactional change emerges and evolves in a university context. From the perspective of Yin's typologies, this study can be viewed as an explanatory case study. The explanatory purpose comes from the intent to understand and explain the transactional change dynamics within an HEI. The explanatory approach chosen is twofold at that: to get a grasp of the antecedent influences on the transactional change process; and to elucidate the patterns of relationships between organizational structure, policy frameworks, management practices, and climate which, both individually and through synergy, create the environment that makes transactional change happen.

The sub-section that follows outlines the reasons for selecting the case for investigation in the framework of this study.

4.5.1 Selection of the case

An important issue in a case study research is the number of case studies to be conducted. Given that this interpretive study aims to elucidate the phenomenon of transactional change in a HE setting by explaining "the complex processes that lead to understanding the dynamics of change across time and space" (Pettigrew, Woodman & Cameron, 2001: 697), the study focuses on a single-case investigation. The goal is to examine the case for insights into the intra-organizational dynamics that underpin a university-wide transactional change effort.

According to Yin (2003), single-case study approach as compared to the multiple-case design can be appropriate if the selected case is a significant one and, therefore, worthy of the exploration; or a revelatory one, when the case focuses on a phenomenon that has not yet undergone substantial investigation. For Rowley (2002), single case studies are useful as a pilot project in multiple case studies. On the whole, as Merriam (2002) suggests, it is important to select a case that will help to learn as much as possible about the research phenomenon.

In light of the above, this study centres on a large-scale transactional change initiative, i.e. Leuven Community for Innovation driven Entrepreneurship (Lcie), conducted by KU Leuven, Belgium (hereafter referred to as 'the University'). Three methodological considerations influenced the case selection strategy to enhance an understanding of a transactional change phenomenon within an HEI. Firstly, the University is experienced in implementing large-scale transactional change initiatives so that much can be learned from the case in question with relevance to both theory and practice. Specifically, the University provides a well-suited context to examine the transactional change dynamics from two angles: to gain insights into the particularities of transactional change processes in an HE setting; and to get perspective on the relevance of the Burke-Litwin model – used as a heuristic tool in the framework of this study – to explain transactional change phenomenon in universities as organizations. Secondly, the results of the research can serve a revelatory purpose, since there are limited studies uncovering the impact of organizational structure, policy frameworks, management practices, and climate on transactional change efforts in an HE setting. Thirdly, the KU Leuven initiative can be used as a pilot case for further investigation of the role of the aforementioned transactional dimensions in fostering emergent change within an HEI. Ultimately, the case selection strategy outlined above is underpinned by the *influential case* method (Seawright & Gerring, 2008) focused on checking assumptions behind a general model of causal relations. "The goal of this style of case study is to explore cases that may be influential vis-à-vis some larger cross-case theory, not to propose new theoretical formulations (though this may be the unintended by-product of an influential case analysis" (Seawright & Gerring, 2008: 303).

Therefore, taking into account the revelatory nature of this case as well as the potential of the case to serve as a preliminary to taking the further investigation of a transactional change phenomenon in an HE setting, this study adopted a qualitative single-case research design.

4.5.2 Rationale for non-anonymisation of the research context

The research literature suggests that anonymisation of contextual data is subject to methodological, epistemological and ethical considerations (Thomson *et al*., 2005; Clark, 2006). Since qualitative research strives to delve into the specifics of 'real life situations', removal of identifying information "inevitably removes contextual information that has potential value to the researcher" (Thomson *et al*., 2005: para, 1). At the same time,

anonymisation is an ethical issue which must underpin the entire research process (Clark, 2006). Taking into consideration the importance the identifying context information for the data analysis and discussion in the framework of this doctoral research, the case study university has not been anonymised. The ethical issues will be addressed in section 4.10. At this point, it is important to highlight the reasons for this strategic approach from the methodological and epistemological perspectives.

First, the institutional and regional characteristics constitute an essential part of the interpretive epistemology underpinning this case study rooted in the situated contextual data analysis. Thus, the contextual data do not just provide the background information but are crucial for gaining a deeper and more comprehensive grasp of the transactional change specifics in the HE setting.

Second, the anonymisation of the research context would result in a radical decrease of the analytically important information which is essential for understanding and explaining of how transactional change has been developing over time across the university-as-system. Anonymising the contextual data, therefore, would essentially diminish the explanatory power of the contextual factors – both exogenous and endogenous – in fostering transactional change processes in universities as organizations.

Third, and related, anonymisation of the research site would significantly reduce the usefulness of the material for other researchers who could build upon this case study. As noted above, the contextual characteristics feature high explanatory power and as such, could help advance further research efforts in analyzing and interpreting the transactional change phenomenon in HE settings. If the research context that informs recommendations and suggestions of this doctoral research would have been anonymised, it would be difficult for future researchers to fully grasp the conclusions and recommendations of this case-based investigation.

Therefore, the researcher of this doctoral study followed Clark (2006) who argues that a blanket process of anonymising all background data is not always relevant and calls for careful, reflexive exploration of what anonymisation strategy to adopt. As Clark (2006) indicates, “an inappropriate strategy could result in inappropriate data analysis” (Clark, 2006: 18). In a similar vein, Corti, Day and Backhouse (2000) note that an appropriate level of

anonymization is predicated upon the nature of the study and its history (Corti, Day & Backhouse, 2000). It can also be mentioned that this is common practice in published higher education literature not to anonymise the case study institution (e.g., Meyer, 2007; Esson & Wang, 2018). Considering all the above, the names of the region and the University as well as the name of the change initiative were not anonymized. However, proper names of the research participants were removed in order to protect their anonymity and privacy. As for the positions of the research participants, they were retained. This latter decision was prompted by the fact that a participant's identity, e.g., as a senior leader, a faculty member or a student, is of crucial importance for the analysis and the understanding of the empirical data.

Another important issue is that of the researcher's previous experience with the case study context and her approaches to reflexivity, as discussed in the next section.

4.5.3 Reflexivity on the researcher's relationship to the case study context

Qualitative research literature underscores the importance of reflexivity defined by Patton (2002) as "a way of emphasizing the importance of self-awareness, political/cultural consciousness, and ownership of one's perspective" (Patton, 2002: 64). It is particularly important for a researcher to be reflective about biases, values, and experiences as well as preexisting assumptions that might have an impact on the research results (e.g., Creswell, 2007; Mauthner & Doucet, 2003; Pillow, 2003; Watt, 2007). Besides, qualitative research might be influenced by theoretical perspectives, ontological and epistemological assumptions, the interpersonal and institutional contexts (Mauthner & Doucet, 2003). Moreover, the term 'reflexivity' which is extensively applied in qualitative research, including social constructionist approaches, may be used by researchers in differing ways (Burr, 1995). It is beyond the scope of this study to discuss multiple uses, varying types, styles and practices of reflexivity in the framework of qualitative studies. For the purposes of this research, a specific mention merits the researcher's reflexivity on the relationship to the study context or, as Merriam *et al.* (2001) put it, where the researcher "stands in relation to the 'other' (Merriam *et al.*, 2001: 411), and how the researcher's positionality might influence the study findings.

When selecting the case for investigation, the researcher deliberately approached KU Leuven, being familiar with the University. KU Leuven is well-known to the academic community worldwide as an outstanding, entrepreneurial university and the researcher had multiple

opportunities to develop a broad perspective on the University's innovative initiatives and practices during her participation in the international conference together with colleagues from KU Leuven. Perhaps most importantly, the researcher was involved in a research project on the introduction of the KU Leuven educational initiative (entitled 'Guided Independent Learning') to other universities (Van Petegem & Kamensky, 2009). This project demonstrated a remarkable capacity of the University to conduct large-scale transactional change initiatives continuously and thereby inspired the researcher to gain a closer acquaintance with the University's approach to foster emergent change. Particularly, the researcher became interested in developing an understanding of how the University's structure, policy frameworks, management practices, and entrepreneurial atmosphere exert influence over transactional change processes. Overall, the researcher was strongly motivated to investigate the transactional change phenomenon in this academic setting being impressed and inspired by the University's capacity to foster transactional change dynamics within the institution.

Given the above, the researcher was aware of the potential bias that could arise from expectations based on her previous experience with the study context. However, before defining the ways in which the researcher used reflexivity to address bias, it is essential to clear up how bias is understood in the framework of this doctoral research. First and foremost, it is worth noting that "debates about objectivity, subjectivity, bias, and reflexivity continue unabated" (Roulston & Shelton, 2015: 334). Thus, there are multiple definitions of bias related to both quantitative and qualitative research methods (Roulston & Shelton, 2015; Burton-Jones, 2009). Furthermore, since the term 'bias' essentially depends on the concepts of 'truth' and 'objectivity' (Hammersley & Gomm, 1997), various research paradigms conceptualize 'bias' and the role of a researcher in different ways (Roulston & Shelton, 2015). From the perspective of foundationalist epistemology and positivist traditions to knowledge construction, bias is equated with subjectivity which is considered to be a threat to the research validity and therefore, a problem to be eliminated (Mehra, 2002; Roulston & Shelton, 2015). Accordingly, "reflexivity is often mentioned in connection with methodological efforts to root out sources of bias…" (Lynch, 2000: 34). In contrast, from the anti-foundational perspectives on bias or "new-paradigm" approaches that embrace critical, constructivist, interpretive, participatory and post-modern paradigms (Lincoln, Lynham & Guba, 2018), bias is not automatically associated with a mistake, moreover, it not possible to completely eliminate bias (Roulston & Shelton, 2015). Thus, within a constructivist paradigm, a researcher is viewed as a "co-constructor of knowledge" (Lincoln, Lynham & Guba, 2018).

It is assumed that "researcher subjectivities may bias, unbalance and limit endeavors, but they may also motivate and illuminate inquiry" (Preissle, 2008: 845). The dilemma, Ahern (1999) argues, is that subjective awareness is useful for qualitative research, and preconceptions, although it might seem paradoxical, facilitate identification of issues and situations (Heidegger, 1962) by alerting researchers to themes that are in common with the broader human experience. Overall, as Roulston & Shelton (2015) indicate, "questions about the role of bias can only be understood in relation to a researcher's theoretical assumptions about knowledge production" (Roulston & Shelton, 2015: 337).

In line with the above, the conceptualization of bias and respective approaches to reflexivity were framed by the epistemological and theoretical assumptions underpinning this doctoral study, i.e., a constructivist interpretive paradigm. Accordingly, the researcher realized that bias might take the form of searching for confirmation of preconceived assumptions, beliefs or concepts (Christensen, Johnson & Turner, 2011), while at the same time, being a positive feature in the sense that the previous experience with the research context might reveal important aspects of the phenomenon under investigation (Hammersley & Gomm, 1999). Therefore, by incorporating reflexivity into this doctoral study, the researcher strived to understand the influences of her previous experience with the research context rather than attempting to remove them (Porter, 1993; Ahern, 1999).

It is essential to note that "there has been no empirical study of how researchers actually practice reflexivity and what it is like for them to do so" (Probst, 2015: 37). Further, there has been much debate about how to use reflexive practices in a particular study context (Patnaik, 2013). In addition, as Cunliffe (2003) notes, "one of the difficulties of reflexive work is that it is always open to criticism…" (Cunliffe, 2003: 986). In the framework of this doctoral research, reflexivity has been operationalized through: (a) critically reflexive questioning of the researcher's basic assumptions with the focus on bringing contradictions, differing interpretations, etc., to the discussion (Cunliffe, 2004); (b) working with multiple (and alternative) interpretations to grasp the different ways of the understanding of a phenomenon (Alvesson, 2003; Alvesson, Hardy & Harley, 2008); (c) practicing 'caring reflexivity' by directly involving participants in a reflexive process (Ralllis & Rossman, 2010). Overall, as academic literature suggests (e.g., Pillow, 2003), the researcher was reflective at all stages of the investigation including the interview process and the data analysis. From this perspective, reflexivity significantly helped the researcher of this doctoral study to raise awareness of how

she got to a certain point in the analysis of the empirical data and in what direction it would be relevant to proceed (Attia & Edge, 2017) as well as to strengthen the validation of the case study findings. It is noteworthy that concrete examples of the researcher's practice of reflexivity and its role in the data analysis will be made explicit in chapter 5: "Data analysis and presentation of findings". At this juncture, it is important to emphasize the point that the incorporation of reflexivity into the investigation process enabled the researcher to put her previous understanding of the study context in a refined perspective which had a twofold effect on the research findings: for one, it was useful for addressing bias; for another, it helped generate a deeper insight regarding the complex nature of transactional change phenomenon in the academic setting as a result of searching for new ideas and perspectives, rather than striving to confirm the preexisting perception and understanding of the study context.

By way of summary, it can be noted that "there are at least three important issues for case research: motivation, inspiration, and illustration" (Siggelkow, 2007: 21). The organizational capacity of the KU Leuven to conduct effective, university-wide transactional change initiatives as well as the University efficiency in designing and implementing Lcie, provided a strong motivation for the researcher to choose Lcie as an inspiring and illustrative transactional change effort for an in-depth case study.

4.6 Data collection

The next important aspect of a case study research is to decide on data collection strategies that will provide the necessary data to answer the research question as well as to address any potential validity threats to these answers (Maxwell, 2005). It is essential to determine therefore what data are to be collected, from whom, and how it will be done (Punch, 1998). In what follows, the data collection strategies underpinning this study are viewed through the lens of (a) sources of the case study evidence; and (b) data gathering procedures.

4.6.1 Case study evidence

Case study evidence may come from multiple and various sources. Accordingly, Yin (2014) points out the need to use as many sources of evidence as possible in order to develop a good case study. In a similar vein, Merriam (2002) encourages the employment of multiple methods of data collection, thereby enhancing the validity of the research findings. This study

combines three major data collection methods: semi-structured interviews; documents; and audiovisual materials.

Semi-structured interviews are selected as the primary source of data collection for this study. According to Blumberg, Cooper and Schindler (2011), the main objectives of semi-structured interviews are twofold: to identify the informant's perspective on the issue and further, to find out if the informant can confirm insights that have been already generated by the researcher. To achieve these objectives, the researcher asked open-ended questions and took care that the participants could provide open-ended responses, without being forced into answering options (Creswell, 2005). In essence, the researcher conducted in-depth interviews exhibiting the core features as follows: *combining structure with flexibility* so that interviewees could raise issues and cover topics in the order most suited to them; *interactive* in the sense that what the researcher asks about and how the questions are framed is built on what the interviewees have already said; *getting below the surface* by using a range of questioning techniques to achieve a deeper understanding of the participant's experiences, their beliefs and values; *generative* in the sense that new knowledge or thoughts are created in course of the interviews when participants put forward ideas and suggestions on a particular topic; *paying attention to language* used by participants to capture meaning as effectively as possible (Yeo *et al.*, 2014: 184). Overall, while being guided by the researcher, this interview approach facilitated the creation of an atmosphere that encourages open dialogue and permitted the participants to elaborate on their thoughts and experiences, i.e., not just to respond to the interview questions.

It is noteworthy that by developing the interview questions, the researcher followed Maxwell (2005), who contends that research questions encapsulate what a researcher wants to understand, whereas interview questions help to acquire that understanding. From this perspective, the researcher strived to avoid a mechanical translation of the research questions into interview questions to use the latter as an interview guide. Instead, the interview questions served as a framework for discussing real issues underpinning transactional change process within the University. Furthermore, the researcher did not conceive the interview questions as 'fixed' and continually modified the interview strategy and refined the interview questions depending on how specific questions worked in real-life contexts. Table 3 below provides an overview of the main interview questions and their relationship to the sub-research questions.

Sub-research questions	Interview questions
1. What antecedent factors promote and inhibit transactional change in this organizational context?	• What are the main drivers for change in the University? • What background factors provide a significant effect on change and development in this organizational setting? • How do the organizational context and institutional characteristics influence large-scale change efforts including Lcie? • Is Lcie a planned change initiative or an emergent one? • What are the major antecedent influences on the launch and development of Lcie?
2. How does organizational structure induce transactional change?	• What are the essential characteristics of the University's organization and governance structure? • Under what governance structure and coordinating mechanisms does Lcie operate? • What are the critical targets for change by implementing Lcie?
3. How do policies and procedures relate to the organizational structure?	• In what way do the institutional vision and related policy affect attitude to change in this organizational setting? • How does the University foster student learning by addressing and challenging their 'disciplinary future self'? • What mechanisms are used to stimulate faculty and staff to maintain a broader university perspective? How does the reward system reflect this value?
4. What are the management practices through which transactional change occurs?	• How do management practices reflect the nature of the dominant cultural mode of the University? • How does the management approach affect development and change in this organizational setting? • What strategies are used to overcome resistance to change? • What is being changed as Lcie unfolds? • What is the role of language in shaping the Lcie-related change processes? • What factors are of major importance to keep momentum by implementing Lcie?
5. What are the likely impacts of structure, policy frameworks, and management practices on the working climate?	• How do the organizational structure, policy frameworks, and management practices impact on motivation and attitude to change in this organizational setting? • How does the organizational climate foster collaborative relationships among various stakeholders engaged in Lcie (e.g., faculty, staff, students)? • What factors matter most to create a climate of participation in a large-scale transactional change effort such as Lcie?

Table 3. Interview questions in relation to the sub-research questions.

Consistent with the strategic approach outlined above, interviewing process was non-linear in nature in the sense that the researcher neither strictly followed the sequence of questions nor covered all the questions listed in Table 3 in every interview. Rather, the interviewing process in the framework of this doctoral study is best to conceptualize with the metaphor proposed by Yeo *et al*. (2014), i.e., 'interview as cartography'. To quote Yeo *et al*. (2014):

> The interview is like the process of mapping an uncharted 'island' that is the interviewee's world or their experience of the research phenomenon. The researcher will build up the cartography of this map by asking questions that identify and

> describe the key features of the island. Mapping questions are designed to scope out the size and shape of the island, providing the interviewer with a sense of where the edges of the island are for that participant. These are questions which start to reveal the dimensions of a topic – the relevant beliefs or experiences. The researcher than probes further to explore these areas… The process is thus an iterative one, weaving together mapping questions that open up a topic with responsive probes that aim to explore aspects of it in depth (Yeo *et al*., 2014: 190-191).

Accordingly, by formulating questions, the researcher of this doctoral study tried to achieve both the breadth of coverage of the most important topics, and the depth of content within each, as Yeo *et al*. (2014) suggest. In so doing, the researcher was selective by posing questions to various and multiple research participants at different stages of the doctoral study. Thus, when the researcher began the interviewing process (February-March, 2017), the initial questions aimed at uncovering the key issues that needed particular attention by investigating the transactional change phenomenon in this organizational setting. Therefore, it was important to start the very first interviews with broad, mapping questions aimed at insight about the University's context and the specifics of Lcie implementation (see Appendices 4, 5, 6). As this doctoral study progressed, it became important to explore particular topics in more detail. For example, a special interview was conducted with two senior leaders to understand how and why the University turned to the Appreciative Inquiry approach, also in relation to the development of the future-self perspective. It is worth noting that in order to get substantive and elaborated responses from interviewees, the researcher used different types of questions outlined in the research literature (e.g., Kvale, 2009; Brinkmann & Kvale, 2015; Qu and Dumay, 2011), i.e., introductory questions (or opening questions), follow-up questions (to question directly what has just been said), probing questions (to draw out more complete narratives), interpreting questions (to clarify and interpret rather than to explore new information), among others.

Essentially, the researcher was cautious about asking leading questions that might potentially influence interviewees' responses. At the same time, as some authors suggest (Kvale, 2009; Brinkmann & Kvale, 2015), leading questions could sometimes be useful to check how reliable the interviewees' answers are or to verify interpretations of the interviewer. The authors argue that in contrast to empiricist and positivist conceptions of knowledge underpinned by a belief in a neutral observational access to a social reality of objective facts,

from a postmodern perspective on knowledge construction, the interviewer can be considered as a traveler and the interview as a conversation in which the knowledge is constructed in and through an interpersonal relationship so that interviewer and interviewee are coauthors and coproducers of the knowledge (Brinkmann & Kvale, 2015). Viewed from this angle,

> leading questions need not reduce the reliability of interviews but may enhance it; rather than being used too much, deliberately leading questions are today probably applied too little in qualitative research interviews … The decisive issue is not whether to lead or not to lead but where the interview questions lead and whether they lead to new, trustworthy, and worthwhile knowledge (Brinkmann & Kvale, 2015: 200-201).

Even so, in the case it was necessary to verify preconceived hypotheses that have been generated based on the proceeding interviews, the researcher paid particular attention to an interviewee's response, e.g., whether the response signaled caution or surprise, and perhaps most importantly, how the response was phrased, or in other words, how the interviewee elaborated on the issue in question. Furthermore, followed the advice of Yeo *et al*. (2014), the researcher was mindful of her own reactions to what she has heard in order not to influence the research interaction. By focusing on the subtleties of the interaction during an interview, the researcher made a concerted effort to monitor reflexively interviewees' responses and her own reactions, thereby minimizing potential validity threats in data collection.

Similarly, by collecting the primary data from elite interviews. i.e., with senior organizational leaders, the researcher used a reflexive approach to gain critical insights into interviewees' points of views and respective data on which their standpoints were based on. Thus, the researcher carefully considered all perspectives provided by the interviewees and consequently, became involved with and tried to understand a range of dimensions when questing for transactional change in higher education. In so doing, the researcher was particularly attentive to potential discrepant evidence that might challenge the research conclusions (Maxwell, 2005). Furthermore, the researcher used a limited number of open-ended questions – from six to eight – in order to have enough time to ask probing questions as the interview session moved on. As indicated by Berry (2002), this type of questioning by elite interviews serves two objectives: it allows the interviewer to get more depth about the topic under discussion as well as to take the interviewer down an unanticipated path when

"the interviewer must decide whether the subject has offered a distracting digression or an interesting new avenue to pursue" (Berry, 2002: 631). From this vantage point, it is important here to note that interviews with the University's leaders were very rewarding. These interviews provided valuable insights into the transactional change phenomenon and opened up new creative perspectives on the ways to take by fostering transactional change processes in universities as organizations. On the whole, the approach to interviewing the organizational leaders in the framework of this doctoral study is consistent with Rice (2010) who suggests "to think about interviewing elites more as an intellectual discussion… to create a space for intellectual dialogue and reflection" (Rice, 2010: 74). This approach promoted what Brinkmann terms "the collaborative nature of interviews" (Brinkmann, 2018: 586) and a resultant authentic discussion of the transactional change phenomenon in this organizational setting.

A focus on engaging interviewees in a reflexive, collaborative discussion was also at the heart of the strategy by conducting interviews with two participants (four interviews) and three participants (one interview). In terms of the interviewees' positions, the two persons interviews were conducted with organizational leaders; a faculty member and an educational supporter; students; and researchers. A three-person group consisted of two representatives of a regional government and one trainee. By considering the exchange of ideas and viewpoints between the participants, the researcher paid concerted attention to whether there were areas of disagreement or there was unanimity on issues under discussion; how the points of view were expressed including the conversational tone, pace of the conversation, etc.; variations in participation between group members, particularly when participants were of different status. It is essential to emphasize that there were neither discrepancies between views and/or perceptions of the interviewees nor any status-related dynamics that could diminish the interaction and the exchange of ideas among the participants interviewed together. All the conversations were collaborative in nature and were most efficient in the sense that they unveiled various facets of the phenomenon under investigation.

The documents provided an additional source of information for the research and essentially supplemented the information gathered from the interviews. Documents from a variety of information sources were studied. The documents examined included the University identity and mission statement, statutory regulations of KU Leuven, Self-evaluation Report of the Faculty of Engineering Science (2015) and other relevant reports on KU Leuven, newspaper

articles, Lcie documents including flyers on individual initiatives being conducted under the Lcie umbrella (e.g., TechStart, Product Innovation Project/PiP) as well as other materials such as e-mail comments, speeches, and data obtained from the KU Leuven website and the Lcie website.

The audiovisual materials gave further information on the case under investigation. The audiovisual materials include videotapes and films on the launch and development of Lcie generated by the research participants. In effect, the audiovisual sources of evidence provided useful, complementary data that played important role in deepening the researcher's understanding of the transactional change dynamics in the course of Lcie implementation.

In summary, several sources of evidence were combined and analyzed to develop the propositions underpinning the research findings. Of note, a thorough review of the documentation was performed before interviewing the research participants and conducting the first site visit.

4.6.2 Data collection procedures

This study used a purposeful sampling approach to select research participants who can inform an understanding of the transactional change phenomenon in an HE setting. As indicated by Patton (1990), by conducting a purposeful sampling it is essential to select and study in-depth information-rich cases from which a researcher can learn as much as possible about the issues that are most important to the purpose of investigation. The overall strategy is to take a stratified purposeful sample of information-rich cases with the aim to identify significant variations rather than a common core, even though the latter may appear in the analysis (Patton, 1990). In a similar vein, Ritchie *et al.* (2014) point out:

> Purposive sampling is precisely what the name suggests. Members of a sample are chosen with a 'purpose' – to represent a type in relation to key criterion. This has two principal aims. The first is to ensure that all the key constituencies of relevance to the subject matter are covered. The second is to ensure that, within each of the key criteria, enough diversity is included so that the impact of characteristic concerned can be explored (Ritchie *et al.*, 2014: 113).

While ensuring the participants' diversity, the researcher followed Merriam (1998), who contends that it is essential for the quality of case study that the phenomenon under investigation is intrinsically bounded. Thus, Merriam (1998) suggests a technique that helps access the boundedness of the topic, namely, to check whether the number of interview participants has a limit as well as to determine a finite amount of time for observation. Without setting a limit, the phenomenon is not bounded enough and therefore, cannot be to be qualified as a case (Merriam, 1998).

Consistent with the above line of thought, the researcher strived to identify information-rich cases within the thoroughly developed sampling frame. By pursuing this strategy, the researcher generated the sampling frame and selected the interviewees in close consultation with an intermediary at the University, commonly termed a "gatekeeper" in the research literature (e.g., Neuman, 2011; Webster, Lewis & Brown, 2014; Mills & Birks, 2014). Since the gatekeeper played an instrumental role in implementing the change initiative, he was familiar to the potential pool of research participants and provided much assistance in identifying the relevant people. Notably, as Neuman (2011) indicates, "dealing with gatekeepers is a recurrent issue as you enter new levels or areas of a field site" (Neuman, 2011: 430). Indeed, the researcher was in permanent contact with the gatekeeper over the entire length of this doctoral research. For example, as the issues under investigation required further and deeper analysis, the gatekeeper offered valuable help to the researcher in expanding and diversifying the pool of potential research participants. Overall, working with the gatekeeper in the framework of this study provided an effective way of generating maximum variation sampling, thereby ensuring that the data gathering procedures can produce a variety of evidence (Sousa, 2014). This sampling strategy enabled the researcher to capture different perspectives on a transactional change phenomenon and to identify central themes which cut across the diversity of interviewees (Punch, 1998).

Following the recommendation of Patton (1990), the researcher employed 'a minimum expected sample size' at the beginning and added to the sample during the research process. The composition of the sample for this case study includes the University leadership (Managing Director of the University Administration and Central Services; Vice Rectors; General Manager of Leuven Research & Development), faculty leadership (dean and vice deans), faculty members, administrative staff, researchers, students as well as external

stakeholders. There were 38 interview participants for a total of 42 interviews. A breakdown of the participants' position and the number of interviews is provided in Table 4.

Positions	Number of research participants	Number of interviews
Senior leaders	5	6 NB: 2 interviews with the Managing Director of the University
Innovation Manager and Lcie coordinator	1	4
Incubator Manager, Lcie	1	1
Dean/Vice Deans/former Vice Deans	4	4
Faculty members	4	4
Educational support services	3	3
Senior administrative staff members	4	4
Administrative support staff members	2	2
Former Presidents of student associations	2	2
Students	3	3
Researchers/PhD. students	4	4
Entrepreneur	1	1
External stakeholders	4	4
Total	38	42

Table 4. Participants breakdown.

The information from the research participants was mainly obtained through one-on-one interviews. On the request of participants, three interviews were conducted with two participants at the same time. The interviews lasted approximately one hour. The initial contact was established with the help of an intermediary at the University. Then, an e-mail was sent with a clarification of the research focus, questions to be asked and the length of the interview. With the participants' permission, each interview was audio recorded (except for one). Also, the researcher took notes during each interview and checked the notes against the recorded material while reflecting on the emerging patterns/themes and findings.

The interviews were conducted during three site visits (March 2017; May 2017; February 2018) and via Skype (from February through August 2017). The site visit in February 2018 was arranged to conduct the follow-up interviews with the University leadership and a management representative. The purpose of the follow-up interviews was to present the research findings and to get feedback on the key themes that arose out of the data analysis.

The next section delineates the approach to data analysis in the framework of this study.

4.7 Data analysis

There are no fixed rules or agreed procedures for analyzing data in qualitative research (Punch, 1998; Spencer *et al.*, 2014; Bryman, 2012; Creswell, 2005). This study used thematic analysis as an overall approach to analysing data. Following the definition of Braun and Clarke (2006), "thematic analysis is a method for identifying, analyzing and reporting patterns (themes) within data" (Braun & Clarke, 2006: 79). Notably, since a process of thematic coding is performed by various analytic traditions, some researchers do not consider thematic analysis to be a specific approach on its right but a more generic method (e.g., Ryan & Bernard, 2000) or a tool that can be applied by different methodologies (e.g., Boyatzis, 1998). At the same time, there are strong arguments in favour of thematic analysis as a specific method for qualitative research that can be efficiently used within different theoretical paradigms, although by using this analytic approach it is recommended to make clear the theoretical position of thematic analysis (Braun & Clarke, 2006).

As stated earlier, the basic epistemological assumptions underpinning this research are rooted in the interpretive paradigm. Accordingly, the study aims to make sense of meanings within the data proceeding on the premise that they are shaped by the social environment. Further, this research addresses a transactional change phenomenon in universities as organizations from a social constructivist perspective that emphasizes multiple interpretations and the complexity of views, as well as maximum reliance on how participants perceive the situation under investigation (Creswell, 2014; Neuman, 2011). Also, the constructivist worldview attaches importance to the context-specific factors, thereby providing another lens through which to analyze participants' viewpoints on the transactional change phenomenon.

Following the theoretical position of the researcher, the focus of the thematic analysis was laid on understanding and interpretation of the context-specific factors that provide a background for capturing meaningful experiences, feelings and perceptions of research participants. Themes (patterns) were primarily identified in a theoretical or a deductive or 'top-down' way (Boyatzis, 1998; Braun & Clarke, 2006) being informed by the Burke-Litwin model and its concepts that "provided a prior direction for thematic analysis" (Hayes, 1997). Yet, the thematic analysis underpinning this study was not confined entirely to a deductive approach. Rather, in attempting to understand meanings and the actual experiences of interview participants beyond the theoretical framework as well as the context where data were collected (Daher *et al*., 2017), the researcher was open to observations and on that basis,

conducted inductive or ‘bottom-up’ development of themes. The chart of the coding scheme set up for this doctoral study provides insight into the categorization of the collected data into the thematic areas by using deductive and inductive approaches (see Appendix 8). Overall, by doing thematic analysis, the researcher followed a six-phase process as suggested by Braun and Clarke (2006): familiarizing with the collected data; generating initial codes; searching for themes; reviewing themes; defining and naming themes; and producing the report (Braun & Clarke, 2006). The phased process of the data analysis and theme development in the framework of this study is detailed below.

The first, familiarization phase, began with a thorough study of documents before interviews and the site visit. During interviews, the researcher took notes and highlighted ideas for subsequent coding of data. Afterwards, the researcher transcribed the interviews which was not a mechanic but essentially an interpretive process of understanding meanings (Lapadat & Lindsay, 1999). To illustrate the interview process, a whole interview transcript is attached as Appendix 6.

At the second phase, generating initial codes from the data, the process of coding was in a certain sense ‘theory-driven’. Thus, by coding the data, the researcher kept in mind the preexisting theoretical framework with its main categories underpinning the sub-research questions of this study. In so doing, the researcher aimed to identify specific features of the data set that would help interpret and explain the transactional change phenomenon in institutions of higher education. Further, by combining the initial coded data into major categories, the researcher also considered the documents’ data in order to get additional confirmation of the validity of main categories. Overall, during the process of data analysis, the researcher used different types of coding in a non-linear way, i.e., going back and forth, coding and re-coding as needed. It is also to mention that the researcher followed the advice of Saldana (2009), namely, when she noticed that the data contained the elements of a possible or developing category, she coded them during the initial data analysis process as well. The researcher’s coding style is exemplified in a coded interview transcript (see Appendix 7).

In searching for themes during the third phase, the researcher adhered to the guidance of Vaismoradi *et al*. (2016) who highlighted the difference between ‘category’ and ‘theme’ as follows: ‘category’ is a description of the participants’ accounts, whereas ‘theme’ designates a

more abstract level that requires interpretation. By analyzing the different codes from the perspective of potential theme development, the researcher sorted out candidate themes and sub-themes proceeding on the assumption that they capture essential points concerning the research question(s).

The fourth phase, reviewing themes, unfolded as a two-level process. At the first level, the extracts of the coded data for each theme were reviewed with the aim to examine whether they form a coherent pattern. At the second level, the validity of individual themes was considered in relation to the entire data set with a twofold purpose: to be sure that the themes were accurately captured in relation to the data set, and to code any additional data within themes that were not coded at the early stages.

During *the fifth phase, defining and naming themes*, the researcher discerned the essence of each theme while considering themes individually and in their relation to other themes. Following the recommendation of Braun and Clarke (2006), the researcher refined the themes until the point when the content and the scope of each theme was explicitly defined and gave the reader a clear impression of what the theme is about.

The sixth phase, producing the report, encompassed the final analysis and report writing. In so doing, the researcher provided sufficient data extracts in order to demonstrate the prevalence of the theme. Thus, in order to support the major themes that arose out of the data analysis, the researcher used extensive quotes and rich details as often practised within a thematic approach (Creswell, 2005). At the same time, the researcher incorporated the quotes in an analytic narrative while making sure that interpretations are consistent with the theoretical framework and give answers to the research question (see chapter 5).

Essentially, the phased analysis of the data described above was developed over some time as a non-linear, recursive process of moving back and forth throughout the phases as needed (Braun & Clarke, 2008). Overall, the researcher strived to conduct a rigorous thematic analysis driven by the research question(s) and the theoretical assumptions.

4.8 Validation of the research

There are diverse typologies of validity developed by various authors (Creswell & Miller, 2000), and there are ongoing discussions of the criteria for the validation of qualitative

research (Sousa, 2014). As part of their concept of "trustworthiness," Guba and Lincoln (1989), for example, developed four categories to estimate the validity of qualitative research, i.e. confirmability, credibility, transferability, and dependability (Guba & Lincoln,1989). Yin (2003) suggests four criteria to establish the quality of case studies: construct validity, internal validity, external validity, and reliability. Maxwell (1992) proposes five categories to ensure qualitative research validity: descriptive validity, interpretive validity, theoretical validity, generalizability, and evaluative validity. This study uses the categorization of Maxwell (1992) to increase the validity of this research following Thomson (2011) who contends that "Maxwell's five categories offer the most thorough conceptualization. The one exception is Carl Auerbach and Louise Silverstein (2003) category of transparency" (Thomson, 2011: 78).

Descriptive validity is concerned with factual accuracy (Maxwell, 1992) – that is, the data themselves, as well as their reporting, must accurately reflect what has been said or done by the participant (Thomson, 2011). To establish a descriptive validity of this study and to ensure that all the relevant data are captured, all the interviews were audio recorded. Further, different data sources were triangulated to provide a cohesive justification for themes (Creswell, 2014). Thus, themes were developed based on several sources of information, namely, interviews in which a diverse range of the participants' perspectives is reflected, extensive documentary evidence and audiovisual materials (see the preceding section).

Interpretive validity concerns the accuracy of the researcher's interpretation of perspectives and meanings that participants attach to objects, events, and behaviours. The issue is to comprehend the studied phenomena based on the viewpoints of participants, i.e., not on the researcher's perspectives and categories (Maxwell, 1992). Bearing this in mind, the researcher asked open-ended questions so that participants could elaborate on their answers. As mentioned earlier, questions were formulated in a clear way that they were not "misleading or directional in an attempt to solicit any response other than the one the respondent would have naturally issued" (Lewis, 2009: 10). Further, the researcher used member checking by asking participants for feedback to ensure the accuracy of interpretations and conclusions.

Theoretical validity relates to the theoretical constructions that the researcher introduces to the study or develops in the course of the investigation (Maxwell, 1992). "What theoretical validity seeks to evaluate is the researcher's concepts and the theorized relationships among the concepts in context with the phenomenon" (Thomson, 2011: 79). Accordingly, the

researcher strived to provide accurate explanations of the phenomenon being studied, i.e., without forcing data to fit a theory (Lewis, 2009).

Generalizability concerns the assumption to what extent the research results can be generalized (Maxwell, 1992). Since this research is based on a single case, it would not be possible to make broad generalizations of the research findings. However, while being aware of this limitation, the researcher does not aim to make generalizations. Instead, the intent is to get a deeper insight into the phenomenon under investigation proceeding on the premise that the research results can be used to inform other sites (Orlikowski & Baroudi, 1991).

Evaluative validity addresses the ability of the researcher to describe and assess data without being judgmental. To achieve evaluative validity, the researcher followed the recommendation of Ravitch and Mittenfelner Carl (2015) and paid particular attention to the choice of words and phrases when interpreting the qualitative data.

In summary, although generalizability and evaluative validity are not central to qualitative research as compared to descriptive, interpretive, and theoretical validity (Maxwell, 1992), Maxwell's typology provided a useful tool for increasing the validity of this research. Furthermore, this study made use of *the category of transparency* (Auerbach & Silverstein, 2003) to ensure that all participants understand the research process (purpose, design, sample selection) and agree with the interpretation of the findings. Overall, the typology described above was used by the researcher as a checklist to consider potential threats to the validity of the study as well as "a framework for thinking about the nature of these threats and the possible ways that specific threats might be addressed" (Maxwell, 1992: 296).

4.9 Limitations of the proposed research design

As mentioned earlier, a primary limitation of this inquiry is the qualitative single case study approach which did not permit the researcher to make broad generalizations of the research findings. However, as Creswell (2014) indicates, the value of qualitative research does not lie in generalizing findings to individuals or sites but in the specific description and themes that were developed in the context of a particular setting. Good qualitative research is distinguished by particularity rather than generalizability (Creswell, 2014). Flyvbjerg (2004) makes a similar point, saying that formal generalization as a source of scientific development is overestimated and `the force of example' is undervalued. Further, the research tried to

minimize this limitation following Yin (2003) who argues that by doing case studies a researcher should aim at analytic generalization and try to "avoid thinking in such confusing terms as "the sample of cases" or "the small sample size of cases", as if a single-case study were like a single respondent in a survey or a single subject in an experiment" (Yin, 2003: 39). Accordingly, the researcher strived to make analytic generalizations trying to link the findings from this case study to theoretical frameworks and concepts employed with the aim to consider the broader implications of this case case-based research for other HE settings.

4.10 Research ethics

As indicated by Webster, Lewis and Brown (2014), ethics should permeate research starting with the early design stages through to reporting and beyond. Accordingly, the researcher addressed the ethical issues at all stages of the research process, i.e., before launching the study, beginning a study, in the course of data collection and data analysis, as well as in reporting, sharing, and storing the data (Creswell, 2014). In so doing, the researcher followed the steps, mostly like those summarized by Creswell (Creswell, 2014: 95-101) and described below.

Before launching the study. As a starting point, the researcher checked two types of literature on ethical issues in social research (Punch, 1998). Thus, the researcher consulted codes and guidelines published by professional associations. Notably, the researcher adhered to the "Ethical Guidelines for Educational Research" of the British Educational Research Association (BERA) (2011) that summarize and reflect key principles of research behaviour in the educational settings. Besides, the researcher studied the literature discussing ethical principles in qualitative research (e.g., 2014; Punch, 1998; Bryman, 2012; Miles & Huberman, 1994; Bell & Bryman, 2007) with a particular focus on ethical issues that can arise in practice (Punch, 1998). Both types of literature provided valuable insights into the essentials of ethical behaviour by conducting research, particularly, "when dealing with the complex research issues that characterize education contexts" (BERA, 2011: 4).

Before beginning the study (i.e., participants' recruitment, data collection, and data analysis), the research permission was obtained from the KU Leuven Research & Development (LRD). To get this permission, the researcher provided all the relevant information about the research project, i.e., the purpose and the objectives of the study; how much time of participants will

be required; specific activities (e.g., interviews) which the researcher intends to conduct; and outcome of the research.

Launching the study. Being aware that ethical issues underpin all stages and phases of the research process, the dissertation project started with a consideration whether the research is timely and relevant (Creswell, 2014; Webster, Lewis & Brown., 2014). More specifically, the researcher conducted the needs assessment and held informal conversations about the pertinence and importance of the topic of investigation. Next, the researcher got voluntary informed consent from all the research participants. To request participation, the researcher took the staged approach (Webster, Lewis & Brown, 2014; Graham, Grewal & Lewis, 2007). Initially, an intermediary of the University introduced the researcher to the selected research participants and asked them whether they would be interested in taking part in this study. It is important to emphasize that by approaching potential participants, the gatekeeper gave the information about the research project and did not put any kind of pressure on the people to participate. Afterwards, the researcher sent out an introductory email to the participants with a detailed description of the research project and interview questions. The goal was to ensure that all participants understand the research process in which they were invited to participate including why their involvement is necessary, how it will be used as well as how and to whom the research results will be reported (BERA, 2011). In this email, the researcher also asked the participants for permission to audio record the interviews. The email was sent out well in advance so that the research participants could make an informed decision on whether to take part in this research and prepare on time. Since the study strived to involve a wide range of research participants, the introductory emails and further correspondence differed slightly. Samples of email communications with potential research participants indicating their informed consent and their willingness to collaborate on this research project is attached as Appendix 9. Overall, the researcher strived to communicate the information efficiently and tried to avoid a 'text-heavy' approach (Webster, Lewis & Brown, 2014).

Doing data collection. By conducting on-site interviewing, the researcher made a concerted effort to minimize disturbing the research setting as much as possible. All the interviews ran as scheduled. Further, the interviews did not take more time than planned in order not to disturb the daily work of participants" (Creswell, 2014).

During the process of data collection, the researcher strived to make the research a collaborative process while being committed to reciprocity between the researcher and the participants. The participants were invited to discuss the interpretation of the research data. In many cases, the participants essentially contributed to the research by providing additional data or information after the interview. For example, some participants provided the researcher with useful links, others forwarded to the researcher relevant charts and brochures that were most helpful for gaining a fuller and more profound understanding of the transactional change phenomenon in the University.

Analyzing the data. In the process of the data analysis, the researcher was conscious of the importance to avoid "taking sides" in the research process. Further, the researcher made a concerted effort to identify the diversity of perspectives on the topic and to present the full range of findings including those that may be contrary to the themes (Creswell, 2014). By using a reflexive approach to the data analysis, the researcher worked with alternative interpretations; in doing so, the researcher directly involved participants in a reflexive process (see chapter 5). Also, the researcher regularly discussed research findings with a management representative in order to get his perspective on the accuracy of the researcher's interpretations and conclusions. Furthermore, the executive summary of the preliminary research results has been presented to the University leadership and to a management representative who provided substantial feedback on the study's results. This 'getting back' component in the research process was important for "operationalizing the ethical obligation of respect for study participants" (Singh & Wassenaar, 2016: 42).

Importantly, the study protected the identity of the research participants by maintaining confidentiality and anonymity of those involved in the research. This means not disclosing the names of those people who have taken part, "and not reporting what they say in ways that could identify them or attributed to them" (Webster, Lewis & Brown, 2014: 96).

Reporting, sharing, and storing data. Striving to provide an accurate interpretation of the data, the researcher checked the accuracy of the data through various validation strategies discussed earlier. Further, the researcher followed the data protection principles to ensure the secure collection and storage of the research data. Overall, the researcher gave much attention to organize and store the qualitative data in an efficient way including regular backups of the

computer files, using a high-quality voice recorder for interviews, developing a system for storing interviews, cataloguing the documents, ensuring safe storage of the research materials.

4.11 Summary

This chapter elaborated on the research design and methodology which was used to develop an understanding of the transactional change phenomenon in a university setting. Placing emphasis on the interactive research design (Maxwell, 2005), the critical design components (i.e., goals, theoretical framework, research questions, methods, and validity) were considered in light of their interaction with each other. The chapter began by discussing the theoretical orientations and philosophical assumptions underpinning this study. Then the rationale for a qualitative explanatory singe case research was presented followed by the description of the data collection procedures, data analysis strategy and validation of the study. Finally, the chapter addressed the limitations of the research design and ethical considerations.

In the next chapter, the main findings from this case-based research are discussed.

CHAPTER 5 DATA ANALYSIS AND PRESENTATION OF FINDINGS

5.1 Introduction

The preceding chapter served to outline the research design and methodology of the dissertation. This chapter presents the key findings from the case study underpinned by a theoretically grounded reflection on the core themes as they emerged from the data analysis.

What follows is a discussion of emerged themes in relation to the sub-research questions organized around the transactional dimensions of the Burke-Litwin model, i.e., organizational structure, policy and procedures, management practices, and climate, with an additional focus on the antecedents of transactional change in the academic setting. The first section focuses on the context-specific antecedent factors promoting and inhibiting the implementation of a transactional change effort (Lcie). Then, the study moves on to examine how the organizational structure, policy, and procedures reinforced by management practices facilitate engagement and buy-in to the transactional change initiative, both individually and through their interrelations. In this framework, the study puts emphasis on the interrelationship between the University's structure and culture with a twofold purpose: first, to show the alignment between the organization's structure and culture as one of the mighty factors

contributing to success of change initiatives in the University; and second, to make explicit the underlying values and assumptions that create a background for getting a deeper insight into the climate dimensions, i.e., the primary focus of this doctoral study. Finally, the study explicates the cumulative effects of the organizational structure, policy frameworks, and management practices on the working climate at the University. A summary of the themes and theme components is provided in Table 5 below.

Themes	Components
5.2 Antecedent factors 5.2.1 Antecedents promoting transactional change 5.2.1.1 Exogenous factors	*Exerting pressure for change* • Changing societal context • Need to compete for government funding *Providing a supportive environment for change* • University autonomy • A regional environment conducive to innovation and entrepreneurship
5.2.1.2 Endogenous factors	• University's worldview • University's 'attitude' • A specialized, autonomous unit • Organizational professionalism
5.2.2 Antecedents inhibiting transactional change	• A large, complex organization • A multi-campus, diffused environment • Autonomy of Faculties • Autonomy of academic staff members
5.3 Organizational structure	• Organization structure exhibits differentiation and integration • Organization structure maintains a balance between vertical control and horizontal coordination • Organization structure aligns with the organization culture
5.4 Policy and procedures	• The policy takes hold in the University's strengths • The policy encourages 'inspiration' and 'anchoring' • The policy fosters dialogue
5.5 Management practices	• Combining planned and emergent approaches to change • Crafting transactional change with change agents • Fostering transactional change dynamics through the implementation tactics
5.6 Work climate	• A trust- and freedom-led climate • A climate for creativity and innovation • A climate oriented toward participation

Table 5. Research findings: a thematic analysis.

5.2 Antecedent factors

5.2.1 Antecedents promoting transactional change

5.2.1.1 Exogenous factors

By discussing the antecedent influences on the launch and development of Lcie as a transactional change initiative, interviewees - the university leadership, in particular - put a strong emphasis on the exogenous, or outside, factors. A senior leader gave the following explanation of why exogenous factors have a crucial role to play in fostering change in the university setting:

> Change processes in universities are very complex. On the one hand, scientists change the way we think. On the other hand, universities are most conservative in effectuating any change to their processes, to their constituencies, etc. This means from the perspective of this university: if you want change to occur, you always need the support of, what I would call, exogenous factors or exogenous elements. If the change has to come from the inside, and only the inside, it is tough to implement it because of the status quo, because of types of the internal allocation processes, because of engagements of everyone. Once you have identified an exogenous factor, you can exert pressure on the organization to change. Then you may get things a bit faster (Senior leader).

As follows from the interviews, the factors that drive transactional change from outside fall into two categories: exerting pressure for change and providing a supportive environment for change. With regards to factors that put exogenous pressure on the University to launch a change, interviewees highlighted the changing societal context and the need to compete for government funding.

Changing societal context. Many interviewees recognized a twofold effect of changing society on the student population and the University at large: for one, it fosters institutional reflection on the role of the University in a changing society; for another - and this is important from the Lcie development perspective – today's social context impacts on students' demands and increases their entrepreneurial spirit. As a manager emphasized, the changing role of universities in society, reflection on this issue at the University level and the drive from students became a strong antecedent factor for launching Lcie:

> In a period of societal change, universities have to reflect on their role in the time of moves. The key question is what the future role of the university should be. We have been asking this question at the University level. Thus, the changing context in society and awareness at the University level combined with the drive from students became a strong antecedent factor for launching Lcie (Manager).

A former student – currently, a Lcie administrative staff member – expressed the same view by indicating that the changing societal context fosters entrepreneurial thinking among students. This interviewee pointed out that students think more now how to start their own business because many enterprises go bankrupt or fire people and with IT and internet technology it is easier to implement business ideas. In his opinion, "a change in the mind of students is going on".

Notably, the literature on change in higher education underscores the point that students' demands can exert strong pressure for change in universities as organizations (Brown, 2012). This has also happened in the case of Lcie that has been launched and developed as a student-driven initiative. From the perspective of a Dean, a critical precursor for the successful implementation of Lcie was students' demand:

> A lot in this university is coming from our clients, i.e., from students. In the case of Lcie, a crucial factor was a changing level of expectations among students and an increase of entrepreneurial spirit among the high potential students at this faculty. So, the student initiative was first (Dean).

Overall, the research findings suggest that the societal change that triggers students' demands for acquiring entrepreneurial skills and competencies was one of the crucial promoting factors for the transactional change initiative such as Lcie.

Need to compete for government funding. Another exogenous factor that exerted significant pressure for change, and thereby fostered transactional change dynamics within the University, was the introduction of competition for government funds. As discussed above in this study, the new funding system - established in Flanders in 2008 - is essentially output oriented (see chapter 3). Thus, Flemish universities receive a block grant which is annually

adjusted, with output criteria playing a significant role. As indicated by interviewees, change in the funding system resulted in a striking increase in competition within the University and generated processes leading to transactional change. A senior leader explicitly pointed out that exogenous factors, for instance, when the government decides to introduce competition in certain funding mechanisms is a crucial lever for fostering transactional change processes in universities:

> I think that one of the biggest changes that were effectuated in Flanders over the last fifteen years was a new funding model for the university block grants. This model introduced some output criteria; before it, they were input-based. So, the only thing was countered was the number of students you had. All of a sudden, it was not just the number of students, but the number of credits students obtained, the number of degrees that were awarded, the number of PhDs obtained. That was again an exogenous factor that forced the University to think and to adapt and to adopt (Senior leader).

Therefore, the changing societal context that increased the entrepreneurial spirit of students, as well as the need to compete for government funding, were perceived by interviewees as the exogenous antecedent factors which were likely to provide the powerful foundation for the transactional change processes underpinning the implementation of Lcie. Along with the exogenous factors exerting pressure for change, interviewees highlighted the role of the external environment in providing positive reinforcement for pertinent change initiatives. In particular, the University autonomy and the regional environment conducive to innovation and entrepreneurship were perceived by interviewees as important antecedent factors facilitating developmental processes in this organization setting.

University autonomy. As previously discussed, the important hallmark of the HE system in Flanders is a significant degree of autonomy granted to Flemish HEIs. Particularly, KU Leuven, as one of the two 'free' universities in Flanders, is autonomous in terms of its decision-making processes, internal governance structure, allocation of financial resources and related issues. One senior leader emphasized the advantage of institutional autonomy for the University:

> The first important element in the governance structure is that we have always been independent of the government. There are only two universities in Flanders that have their own charter. Our charter is not approved by the Parliament. All the other universities have a charter that is approved by the Parliament. This means that once you have a charter and your rules of the association are approved by government bodies, then you have government interference. We only have a Commissioner from the Government, i.e., a person responsible for looking into the use of public money that occurs in the institution. But he has just supervisory power. There is no interference either in day-to-day operations or in the strategic decision making (Senior leader).

The substantial impact of administrative and financial autonomy on the University's operations and pertinent change initiatives was apparent through the interview data. One senior administrator noted that "the extent of institutional autonomy to be creative is an important factor in enabling and fostering change initiatives." Consistently, interviewees emphasized the point that institutional autonomy fosters the dynamic character of the organization, which strengthens the capacity of the University to compete on the global scale. From this perspective, interviewees distinctly highlighted the important role of the regional authorities in creating favourable conditions for advancing innovation and entrepreneurship.

A regional environment conducive to innovation and entrepreneurship. It is important to reiterate the point that Flanders, and the province of Flemish Brabant in particular, actively promote innovation and entrepreneurship in the region. Accordingly, the interview data revealed a strong support for the regional government's innovation and entrepreneurship-related initiatives. As indicated by interviewees, the regional government launches many calls for projects with the aim to promote an entrepreneurial mindset. A staff member explained that a project can be prepared together with partners and money are to be returned when activities have been started. In her opinion, government support is an important factor in fostering implementation of relevant projects, also because it fosters team collaboration:

> You have money for the project, but what is also important you have to execute the project together with partners within the university or with industry or with students. You have to work together which is very important if you want to start up something successfully (Staff member).

As follows from interviews, the province of Flemish Brabant took an active role in advancing the development of Lcie and thereby significantly helped this pertinent initiative to succeed. A manager emphasized that a local government support was an important factor in implementing Lcie. Thus, a small budget made available by the local government significantly helped "to start the student incubator project". Another interviewee reinforced this point by saying that a pilot project launched together with the province Flemish Brabant significantly helped to create an incubator where students can work together on their projects and focus on coaching, internships and another kind of activities. On the whole, the regional environment favourable to innovation and entrepreneurship was perceived by interviewees as a strong context-specific antecedent factor that played a pivotal role in implementing Lcie.

In summary, the exogenous pressure being leveraged by the supportive environmental context created the antecedent conditions that promoted transactional change processes underpinning Lcie. At the same time, the research findings indicate that it is the interplay of the exogenous and endogenous, or inside, factors that established powerful contexts "to create inner momentum and energy for change" (Eckel, Hill & Green, 1998: 9). The endogenous underpinnings of Lcie and the themes that emerged from the data analysis are presented below.

5.2.1.2 Endogenous factors

The data analysis highlighted several endogenous factors exerting positive antecedent influence on the initiation and development of Lcie. Some of these factors are conceptual in nature; others are related to the specific University's characteristics. From a conceptual perspective, these factors include the organization's worldview and the organization's 'attitude'. Among the factors relating to the distinguishing characteristics of the University, the existence of a highly specialized, autonomous unit (LRD) and organizational professionalism are especially significant.

University's worldview. As discussed in the literature review chapter, organizational worldview and belief system form and direct values, perceptions, attitudes, and behaviours of organizational members as well as purpose, priorities, policy, procedures, and structures of the organization (Levy & Merry, 1986). These values and beliefs comprise a conceptual framework as a coherent set of concepts which reflects the organization's understanding of

the world and helps to make decisions in relation to it (Kaplan, 2000). By sustaining the organizational commitment and ownership of the concepts, the worldview becomes an essential factor for activating social energy necessary to draw the organization into the transactional change process.

A senior leader reported that the organizational philosophy behind the University's worldview is "social personalism". To quote a senior leader:

> The philosophical and ideological background of this university has a long-standing tradition in personalism, that is, looking at a person as a whole human being with all his dimensions, i.e., intellectual, social, biological (also in the context of the ecological system), and spiritual. The reason why I speak about social personalism is that the social component in our approach is very important. So, the starting point is not an autonomous subject who can create his or her own identity from nothing, but someone who is entering our university with a history of social context which is there as possibilities but sometimes as limits to that identity (Senior leader).

The philosophical perspective of social personalism underpins the concept of 'future self' that was developed by the University to highlight the importance of future identities which individual students project onto themselves. The 'future self' perspective and the related image of the 'disciplinary future self' that students create by choosing a field of study, were discussed in the previous chapter. However, for the purposes of this research, it is relevant to illuminate again the essence of the 'future self' perspective which one senior leader captured as follows:

> We added the perspective of 'the future self 'by saying that even if people have possibilities and limits, they have a perspective for the future. We think that appealing to 'future self' in a person generates resources, strengths, motivation to learn deeper and more integrated. By appealing to 'future self' already at the bachelor level, we mobilize what a student has in himself or herself to become a human person in the personalistic sense of the word (Senior leader).

Even though there was a difference of opinion on the practical applicability of the future self concept, many interviewees perceived this educational approach positively. A senior

administrative staff member expressed the opinion that the future self concept (and related education policy) is very relevant for corporate relations:

> At the moment it is easy for the corporate relations - we have an education policy which says that we have to work on the future self of our students. We have to create a culture in which students can try certain things by errors and failures so that they know before ending their studies what position they want to take in the labour market. That means that as corporate relations we can do many things. There is a very good policy at the moment (Senior administrative staff member).

Importantly, the future self perspective on education resulted in the expansion of the university-wide offer of academic programmes. In this framework, fostering entrepreneurial education aimed at students who define their future selves in terms of the university-driven and academically-grounded entrepreneurship emerged as one of the University's strategic goals and thereby advanced the implementation of Lcie. Thus, Fyen (2016) emphasized that it was an important contextual factor that the Lcie initiative "has been run in parallel with a newly adopted education policy plan that put 'disciplinary future self at the forefront. This concept highlights the importance the university attaches to each individual being able to look for and improve his/her talents to the best of their abilities. This new policy plan also resulted in entrepreneurial skills being much more in the forefront in various faculties, if this was not already the case so (Fyen, 2016: 38-39).

Some interviewees underscored the point that the implementation of the disciplinary future self perspective in the curriculum was a strong challenge for the academic programs. Nevertheless, and it is important to highlight in the framework of this research, faculties started looking for ways to appeal to the future self in educational programmes and gave considerable thought as to how they could introduce the future self in the curriculum. As indicated by a Vice Dean, Faculties started exploring what the disciplinary future self would mean within their research context, within their professional context and launched relevant initiatives. As an example, the Vice Dean explained how the disciplinary future self was translated into the medical curriculum:

> We connected to the international framework – it was first developed in Canada, and now it is used worldwide - where medical doctors are described through the function

> of seven roles, i.e., a scientist, a communicator, an expert and so on. So, the disciplinary future self was translated into the curriculum by using the seven roles which we discussed with students within the different courses, for example, cell biology, etc. That is an example of how we translated the central policy setting – 'disciplinary future self '- into the specifics of the curriculum (Vice Dean).

Therefore, the findings suggest that the University's worldview underpinned by the 'disciplinary future self' perspective provided the antecedent influence on the initiation of the university-wide changes which in turn, fostered the development of Lcie. The organizational 'attitude' towards society, education, and learning, discussed in the next section, helped to frame the University's strategic thinking about how to create a dynamic setting for entrepreneurial education and thereby to address the relevant societal needs in the time of continues change.

University's 'attitude'. As discussed in the literature review section, organizational 'attitude' is an essential "invisible" characteristic that distinguishes organizations 'with capacity'. 'Attitude' provides the foundation for an organization "to build its confidence to act in and on the world in a way it believes can be effective and have an impact… Another aspect of 'attitude' is accepting responsibility for the social and physical conditions 'out there', whatever the organization faces in the world… these 'attitudes' are the basis for effective action in the world…" (Kaplan, 2000: 518). Overall, the organizational 'attitude' creates a frame of reference for organizational reflection on how to deliver an effective response to emerging societal needs and changing circumstances. Importantly, as Weber (2002) points out, if firms have to be responsive to the changing environment in order to survive, research-intensive universities are to work on the premise that they should be both *responsive* and *responsible* towards the community they serve. The former implies that research-intensive universities should be attuned to what society expects from them; the latter suggests that they should guide reflection and policy-making in society, thereby protecting societal interests in the long run (Weber, 2002).

The research findings indicate that by acting responsively and responsibly, the University directs the organizational 'attitude' towards amplifying the effectiveness of education and research in service to society. As indicated in the Policy Plan (2014-2018):

> Within a historical but modern structure, there is enough time and space to reflect on our actions. KU Leuven's sole aim is not to shape the students as individuals. It also aims to contribute to society. Not only the students but the entire academic community, constantly shaping and reshaping itself and so moulding society and the future, are impacted by our education (Gosselink & Pollefeyt, 2014: 8).

In line with this perspective, the University continuously reflects on its strategies and goals in the changing environment and makes consistent efforts to implement constructive and beneficial change initiatives. A Vice Dean emphasized this point by saying that it is possible to implement change only "if you believe that the change dynamics is beneficial for the university and more broadly speaking to society."

In summary, the University's worldview and the University's 'attitude' were identified as conceptual levers that shape organizational capacity to recognize pertinent societal developments and perform respective activities. The existence of highly specialized units – a strong technology transfer office (LRD) in the case of Lcie - and organizational professionalism create powerful contexts that inspire innovation and entrepreneurship and, furthermore, add capacity to address the challenge of transactional change in this organizational setting.

A specialized, autonomous unit. As explicated in the previous chapter, the University has a long-standing tradition of fostering innovation and entrepreneurship. The technology transfer office (LRD) is instrumental in this respect. The role of LRD in fostering the entrepreneurial spirit within the University and in driving transactional change processes by implementing Lcie will be explored in more detail later in this study. In this instance, it is essential to highlight the powerful impact of LRD on fostering entrepreneurial intent of students. As previously mentioned, LRD – as the first technology transfer office in Europe - has much experience in establishing spin-off companies (see chapter 3). A manager also emphasized this point in interview by indicating that LRD has a solid record of spin-off companies not only on the quantitative level but also on the qualitative level; a typical survival rate of these companies is 85% which is high. From the manager's perspective, the existence of a very strong technology transfer office, the changing societal context, awareness of this change at the University level and a drive from students - "who kind of discovered that

there was a good track level of start-up companies" - significantly facilitated the implementation of Lcie.

On the whole, many interviewees claimed that LRD, as a highly professional autonomous unit, made a substantial impact on students' motivation for entrepreneurship and thereby appeared to be a vital antecedent factor for energizing transactional change processes related to the implementation of Lcie.

Organizational professionalism. Another important finding concerned organizational professionalism as an essential antecedent force or condition significantly affecting transactional change within the University. This finding suggests that organizational professionalism guides and structures transactional change processes in an efficient way, thereby, making change happen. In the opinion of a senior leader, building a professional organization is an important antecedent of change in organizations:

> I think that inside the organization - and not all academics will agree with me now – a necessary precursor to change is building a professional organization. If you don't have a professional organization, your change processes will always be messy by definition. You will not be able to support a change professionally if you don't have a professional organization. If you don't have a professional ICT support, if you don't have a professional unit like Leuven Research & Development (Senior leader).

The senior leader particularly highlighted the function design system as a precursor to change in this organizational setting. As indicated by the senior leader, the introduction of the organizational function design system provided a framework for how to think about organizational processes and their potential change:

> Once you start thinking about those processes, you can start thinking about changing those processes, but you need a kind of a framework to do this. That is what I mean by professional organization, i.e., the organization that can cope with change, that can construct change, that can be professional in doing that. That is for me a critical precursor for change (Senior leader).

The senior leader provided further explanation for why the efficient function design system is among the crucial antecedent factors that foster development and change within the University. In his opinion, an organizational function design system significantly promotes change by providing a frame of reference for the University's members so that everyone knows what the structure of her or his department looks like, what career possibilities are, what the functions are, how those functions are comparable across the University. The senior leader mentioned that the University started developing an organizational function design system about twelve years ago. Previously, there were Faculties at the University where ICT consultants had a grade of six, and there were other Faculties where the same ICT consultants had a grade of nine - this was a personal decision of Dean. Now, it is a transparent process which, from the perspective of the senior leader, enables change in the organization:

> In fact, it enables organizational change because it enables you to question the local organization, and you can only do this if you have a professional system in place to support this type of processes. This is an example of a precursor (Senior leader).

Furthermore, the senior leader underscored the importance of the organizational function design system for fostering intra-organizational mobility of the personnel to advance organizational professionalism. In the opinion of the senior leader, it is most important to foster mobility in the organization as a part of the professional development, and the University's organizational function design system essentially supports mobility processes:

> Our organizational function design system allows people to be mobile across the organization, because you move from a function in a particular department to a function in another department. This is for me the next important challenge, i.e., how to increase and to enhance mobility on the professional side of the organization (Senior leader).

Notably, the organizational professionalism is advanced through the efficient, professional development initiatives offered by the University to its faculty members and administrative staff, including the University leadership. The training courses offered by the University's HR Department feature a wide range of topics being available voluntarily. As indicated by Evans (2017a), "professional development initiatives or opportunities must lead to participants' recognizing what currently, for them, is potentially a "better way" of doing their work"

(Evans, 2017a: 127). This perspective underpins the University's policy on professional development which manifests itself, above all, in the willingness of faculty and staff to take full advantage of professional development opportunities provided by the University. A staff member mentioned in interview that the multiple courses offered by the HR department are very popular in the University – "if you see an interesting course, you have to enroll very fast or it is full".

Importantly, the University pays particular attention to strengthening digital skills and competencies of its faculty and staff. As senior leader expressed the view that good digital competence of the University's professional staff is of primary importance because more and more opportunities occur to use digital technologies across teaching processes, administrative processes. Accordingly, fostering digital competence is one of the key focal points in terms of training and professional development at the University.

Further, the University offers leadership training programmes. This is particularly noteworthy because it distinguishes the University from many HEIs worldwide. In effect, its leadership training reflects the University's professional approach to meeting the challenges of the changing higher education sector. To quote Newman, Couturier and Scurry (2004):

> In every sector facing change and competition, there is an issue with regards to leadership. There are, however, some concerns specific to higher education that deserve attention… Higher education, facing change and high risks, is in need of new and better leadership now…. This means that institutions must make a continuous effort in two critical areas. The first is to improve the search process. The second is the need for leadership development - a subject that is not addressed at all on most campuses, leaving higher education as one of the few sectors of society that does not focus on a constant effort to find and develop leaders (Newman, Couturier & Scurry, 2004: 199).

Overall, a senior leader emphasized that the organizational professionalism is visible in the entrepreneurial dynamics within the University. As indicated by the senior leader, the University has been developed in a very professional organization over the last years. The senior leader explained that since budgets are being increasingly constrained, and the University always has a tension to support the central administration versus the academic

side, the decision has been made to allow external services, i.e., to have customers outside the University. The senior leader gave a very illustrative example that provides an important insight into how the entrepreneurial dynamics is fostered in the University:

> We have the ICT system in our libraries. If we would only have our central budgets to pay for the ICT library staff, we would be able to pay five full-time equivalents. Today we have 20 full-time equivalents working in our library ICT department. How do we do this? We negotiated with our software supplier that we could license their software. Also, we offer library service to external parties as well. For instance, this university runs the Library of the European Central Bank in Frankfurt. This university runs the Library of Belgium. This university runs all the provincial libraries in Flanders. Now we are participating in a tender in the Netherlands to support the Dutch city libraries. This brings in customer centricity and economies of scale. This means that there is the entrepreneurial dynamics in the University; it is not just university bureaucracy anymore (Senior leader).

This example makes it apparent that organizational professionalism is an intrinsic precursor to change and development in this academic setting. By fostering proactive thinking and entrepreneurship, organizational professionalism creates transactional change dynamics within the institution. Furthermore, organizational professionalism is likely to condition the efficiency of transactional change processes underpinning the implementation of Lcie.

In summary, the promoting factors – both exogenous and endogenous - created favourable antecedent conditions for the development of Lcie by energizing transactional change within the institution-as-system. At the same time, there were several endogenous factors at play, inhibiting transactional change processes. The next section considers barriers to Lcie implementation highlighted by interviewees.

5.2.2 Antecedents inhibiting transactional change

A large, complex organization. There is a sense from many interviewees that one of the inhibiting factors to University-wide transactional change processes is organizational complexity. As described in the preceding chapter, KU Leuven comprises three major entities which possess legal and operational autonomy, i.e., the University itself, KU Leuven Research and Development (LRD) and KU Leuven University Hospitals. The University

itself has a matrix-like organization structure in which the vertical structure - composed of three overarching Groups subdivided into Faculties and Departments - is coupled with a horizontal structure embracing research divisions under the umbrella of LRD. Evidently, the complex, multi-layered structure is an inhibiting factor for University-wide change initiatives including Lcie. One senior administrator noted in this respect:

> The inhibiting factor is a hierarchy. The fact that you are divided into Faculties. The fact that you have lots of Departments. Look at the organization, i.e., at the whole matrix – people work across the matrix in different Departments and research Group or Faculty whatever. That is an inhibiting factor, and that is a big one at KU Leuven. We are a big, comprehensive University. We need structure to keep things going. But the structure is also very inhibiting (Senior administrator).

Along with a complex, highly stratified organization structure, transactional change processes underpinning Lcie were hampered by a multi-campus, diffused environment, discussed next.

A multi-campus, diffused environment. As mentioned earlier, KU Leuven is linked to university colleges across Flanders and Brussels - all together they comprise the KU Leuven Association. In this framework, there is a big difference between the campuses that had adverse consequences for the implementation of Lcie as a University-wide educational change initiative. As a staff member observed, some campuses are more technology focused, whereas the other are very much entrepreneurship focused. Furthermore, there are campuses that offer only one or two courses on entrepreneurship or management in the whole programme. In the opinion of the staff member, part of the challenge by implementing Lcie was to deal with the variance in entrepreneurship attitude among faculty members across different campuses:

> Colleagues at our campus in Leuven are entrepreneurial, at least most of them. But colleagues at other campuses are not very entrepreneurial. So how can they teach their students to be entrepreneurial if they do not have this mindset? (Staff member).

Consequently, Lcie was challenged by the need to adjust its implementation strategy and tactics based on the essential characteristics of each campus, as the comment below indicates:

> It is a challenge. If we want to broaden the Lcie concept to the Antwerp and Brussels campuses, it will not be copy and paste. We will have to look at the structures, at the profile of our students, and we will have to look at the right way to implement it and to communicate it to our students. It will be a challenge in a way that it will never be copy and paste. Each campus will need its own approach. We need to have our students in mind and offer support to them, and it will be a little bit different at each campus (Administrative staff member).

Overall, the complexity of the educational landscape shaped by the multi-campus, diffused environment impeded the extensive involvement of students and faculty members in the transactional change processes underpinning Lcie. This challenge was strengthened even more by the autonomy of Faculties discussed next.

Autonomy of Faculties. A consistent theme in the interviews was the autonomy of Faculties (i.e., organization divisions of the University) that complicates the implementation of organization-wide change initiatives. As previously discussed, Faculties are authorized to develop their own vision, mission and strategy on education in the framework of the overall institutional policy. Furthermore, Faculties and Departments have fiscal autonomy, being free to decide how to spend funds allocated to them within the Group funding model. All these factors make it a considerable challenge to engage Faculties and their staff members in the University-wide change. Dean expressed the opinion that the existence of Groups, Faculties and Departments which like vertical pillars stand next to each other instead of being interconnected is the most important hindrance by implementing change initiatives:

> It is sometimes extremely difficult if a Faculty launches an initiative, and you make it like Lcie too explicit. If the initiative comes from one Faculty, it is almost a handicap instead of an asset, and it is much more difficult to scale up the initiative towards other Faculties. But if you want to build an entrepreneurial community, as it is in case of Lcie, it needs the collaboration of all the Faculties and Schools at KU Leuven (Dean).

An administrative staff member gave an example that shows how challenging it might be for the central administration to implement University-wide changes:

> At the central level, we have created a database with vacancies. Much effort has been put into this database. There are many national and international vacancies in the database, and our idea is that all students should use it. Now several Faculties say that they are going to build their own databases. But if every Faculty says that the central database will not be necessary - and Faculties have this kind of autonomy to do that - nobody, not even the Rector, can say that this is not possible, and we are going for the central idea. It will not work (Administrative staff member).

The above means that the involvement of Faculties is a crucial factor for making change happen. In the case of Lcie, it was a particular challenge, since it was necessary to cross the boundaries of different disciplines to reach out to students from all the backgrounds. To quote a manager:

> If you look at the way how the University is set up, within our system Faculties have a high level of autonomy. The University of Leuven is almost six hundred years old. We started in the Middle Ages basically with four Faculties. Now we have sixteen Faculties, but the organizational structure of the University has not significantly changed over time in that matter. It means that we still have the structure, which is linked to mono disciplines, e.g., Engineering Faculty, Philosophical Faculty, which is good of course. But if you look at the concept like entrepreneurship – it should not be attributed to a certain Faculty, in my opinion (Manager).

Another issue that made the implementation of Lcie a challenging and difficult undertaking was related to the fact that entrepreneurship is usually associated with the Faculty of Business and Economics. In effect, it was a strong inhibiting factor, as a manager explained:

> One of the inhibiting factors was that mentally and semantically people associate entrepreneurship with the Faculty of Business and Economics. The entrepreneurial intent of students and staff is higher at this Faculty. That is the reason why people think that there is a correlation, but it is not a one-to-one correlation. Entrepreneurship should exist in the mentality in any Faculty (Manager).

As follows from the above, a big challenge by implementing Lcie was to deal with the interdisciplinary nature of entrepreneurship. From this perspective, the issue was not only to

arouse the interest of academic staff members to introduce entrepreneurship in a wide range of disciplines and programmes but also to overcome vested interests of Faculties inhibiting the development of an entrepreneurial community within the institution. As noted by a Dean, interdisciplinarity is extremely important in the domain of entrepreneurship. In his opinion, the ideal group of student entrepreneurship teams should be comprised of, for example, civil engineers with a few business engineers, business and economics students - each of them bringing their own perspective to the team effort. However, building this type of entrepreneurial community required collaboration of all Faculties and Schools - it was very difficult to achieve by implementing Lcie:

> It took me almost a year to get it in case of Lcie. Because the initiative was so much driven by the School of Economics and Business at that time, other Deans felt that we start to interfere in their educational approach. It has completely changed over the years, but at the very beginning it has slowed down the initiative, it slowed down the speed we could collect the necessary financial resources to get it in the air (Dean).

In summary, the autonomy of Faculties significantly challenged the creation of a University-wide structure necessary for launching Lcie. The autonomy of academic staff members made this task even more difficult.

Acquiescence of academic staff members. Many interviewees highlighted the autonomy of faculty members as a strong inhibiting factor for transactional changes instigated by Lcie. The interview participants emphasized that professors value their independence and possess the freedom to make their own decisions whether to support or reject the emerging change processes. For example, a Vice Dean noted that "a professor belongs the staff category 'independent academic staff'. The first word 'independent' is valuable for some professors".

It is essential to note that the term 'professor' has a different meaning in many European countries as compared to North America. Accordingly, academic literature draws attention to the inter-continental differences in interpretations of the term 'professor' and highlights the importance to make it clear what the term 'professor' means in a particular national context (e.g., Evans, 2015, 2016, 2018b; Evans, Homer & Rayner, 2013). Thus, in the UK the title 'professor' corresponds to the North American full professor and refers to the most senior academics who are distinguished on the basis of excellence in research and, sometimes

teaching (Evans, 2015). In contrast, the title ‘professor’ in Flanders denotes senior academic staff or appointed faculty members who include assistant professors, associate professors, professors, and full professors. All professors are independent, and as members of the independent academic staff categories have the same rights and responsibilities. For example, assistant professors supervise PhD students, acquire funding, etc. The only difference is that the formal positions, such as Dean, Rector, etc., can only be taken up by full professors. The usage of the term ‘professor’ in the framework of this doctoral study is consistent with its application in the Flemish HE system.

In effect, the discretionary power of individual professors and its impact on transactional change within the University was repeatedly emphasized during the interviews. Accordingly, many interviewees underscored the importance of convincing faculty members in the relevance of a change effort. For example, a Vice Dean expressed the view that one of the driving forces for change at the University is at the level of the academic staff. As he noted, if faculty members are not convinced to change their way of thinking or to change their practice, then it is not easy to implement a change initiative even if it is a good one.

Notably, the engagement of staff members in change processes as a precondition for successful organizational change in higher education and beyond has been widely discussed throughout the research and practice literature (e.g., Brown, 2012; Harvey, 2005; Buono & Kerber, 2010). Evidence has shown that academics tend to resist change when it is perceived as threatening to their core values and practices (Robertson, Robins, & Cox, 2009). Likewise, if there is a discrepancy between values reflected in the new changed environment and the individual values, the imposed change creates dissatisfaction (Evans, 2017b). Overall, academics usually commit themselves to those change initiatives, which they feel to be relevant and justified. Accordingly, when planning for change, managers should consider how to engage academic staff because a lack of bottom up commitment is a powerful impeding factor for a change initiative (Newton, 2003). Consistent with the authors who emphasize the importance of getting staff on-side, the findings and evidence from this study provide further input to this discussion by addressing a wide range of policies, strategies, and tools used by the University to engage organizational members in the implementation of a large-scale transactional change initiative (Lcie).

In summary, this section argued that the antecedent factors significantly affected transactional change in this organizational setting. On the one hand, the development of Lcie was favourably conditioned by the promoting factors, both exogenous and endogenous. On the other hand, there were several inhibiting factors in place that essentially hampered transactional change processes within the University, thereby challenging the implementation of Lcie. Some antecedent factors were universal in nature, whereas others were more context-specific at that. The next section discusses the effects of the organization structure on the launch and development of Lcie.

5.3 Organization structure

As discussed in the literature review chapter, organization structure can significantly facilitate institutional change through promoting differentiation between the operational units and at the same time ensuring their integration in the overall organization structure; keeping a balance between vertical control and horizontal coordination; and achieving congruence between the organization structure and culture. The research has shown that the structural arrangements of KU Leuven possess the characteristics mentioned above and thereby create favourable conditions for setting in motion and sustaining transactional change processes. The emerged themes pertaining to the understanding of the functionality of the organization structure for fostering transactional change within the University are presented below.

5.3.1 Organization structure exhibits differentiation and integration

The research findings identified a clear-cut structural differentiation in this organization setting that ensures autonomy for its specialized entities. As previously indicated, the University is comprised of three major entities: the University itself, KU Leuven Research & Development (LRD), and KU Leuven University Hospitals. The two latter have statutory and operational autonomy to set their agenda, to set their policy, etc. (see chapter 3). During the interview, a senior leader further clarified that the University created the internal Board for LRD and the Hospitals, so that the University management does not interfere with the strategy and the operations of the other two entities. He mentioned that there is a representation, for instance, the Rector, the Vice-Rector of Biomedical Sciences and the Managing Director of the University Administration and Central Services are members of the internal Board of the University Hospitals. However, there are many people on that Board who do not belong to the University. Overall, as the senior leader explained, the Board of Trustees is like a General

Assembly of the University in total, but there is a delegation of power of the Board of the University to those two internal Boards.

The findings suggest that the organizational structure created by the University is one of the significant factors affecting transactional change in the institution-as-system. Statutory autonomy allows the highly specialized units to provide a flexible response to forthcoming changes and arising opportunities, thus being a powerful vehicle for change and development. A senior leader expressed the opinion that the special structure makes the University unique and fosters transformative change. However, as he noted, it is important to ensure that the change processes are carefully managed: "with LRD and the Hospitals we can incubate transformation that you would not be able to incubate in the normal University setting. But then you need to manage it carefully".

Consistent with the above, the General Manager of the Leuven Research & Development (LRD) emphasized that the University structure creates many opportunities for the organization members. "If I would have made a job description of my own job ten years ago, probably only thirty per cent would still be valid today. You see so many opportunities, if the technology transfer office (TTO) is autonomous; you have the ability to jump on them" (Edmondson, 2015: 11).

While the specialized entities operate autonomously, they are effectively integrated into the overall organizational structure. Vice Dean expressed the following viewpoint:

> It is important that LRD is a separate entity, so it can have its own dynamics. At the same time, LRD is incorporated in the overall organizational structure of the University. They can look for and develop new initiatives, but it is always part of the University. And there is a good link between the LRD staff and Faculties. For example, in my research group, we are dealing with cell physiology processes that link to neurogenetic diseases. LRD sometimes picks up some of our projects and actively looks for industry partners who could be interested in our work. They have a network of contacts within the industry, with all kinds of investors. At the same time, they are familiar with what is going on in the University, and that allows them to bridge these two worlds (Vice Dean).

In essence, the autonomous units act in a way which exhibits features of a 'network' form of organization (Dill & Sporn, 1995). Within the network structure, knowledge, competencies, and assets are distributed throughout the organization - i.e., they are not concentrated in the centre – whereas integration is promoted through shared values, strong but flexible planning and budgeting systems in which horizontal communication and common incentives are featured prominently (Dill, 1997a). In this framework, the challenge for central administration is to ensure the autonomy of individual units and at the same time, to build and sustain organizational coherence.

Considering the above, the next section delves into how, despite fragmenting forces working upon the integration in a complex, matrix-like organizational structure, the lateral connection and integration is facilitated by a balance between vertical control and horizontal coordination.

5.3.2 Organization structure maintains a balance between vertical control and horizontal coordination

The findings of this research revealed the efficiency of the University's structural arrangements in maintaining a good balance between vertical control and horizontal coordination. First, it is essential to underscore the point that the University governance structure allows of equilibrium in the organization. A senior leader explained:

> Because of independence, we have our Board of Trustees. The Board of Trustees consists of the representatives of society, captains of industry, former Rectors, etc. Then we have the Board of the University. The majority of the Board is comprised of the external people – they do not belong to the day-to-day management of the University. Then we have a dual structure: we have a Chairman of the Board who does not belong to the University, and we have a Rector and a General Manager. The Rector is elected, and the General Manager is appointed by the Board. The General Manager reports to the Rector, but he also reports to the Board. This gives a kind of equilibrium in the organization (Senior leader).

Further, the horizontal integration and shared values are fostered through a form of 'centralized decentralization' (Clark, 1998) - that is, by keeping a good balance between the central policy setting and decentralized implementation. From this perspective, Vice Dean

expressed the view that the University has a good governance model that maintains equilibrium between the central policy setting and the decentralized implementation that gives freedom to act.

In line with the above, a faculty member emphasized the point that the central administration never imposes top-down decisions on how something should be done. Instead, the University sets up general guidelines that should be implemented in accordance with the local specifics and traditions of Faculties. A Vice Dean mentioned that the institutional governance and policy frameworks foster dialogue and engagement at different levels of the University. The challenge is to bring the frameworks in line with the decentralized way of their implementation. To quote the Vice Dean:

> Much governance at the University is decentralized. At the level of Faculties and Departments, there is flexibility to refine HR policy towards specific needs and ambitions. I guess the big challenge, and it is also where successful change initiatives have made a difference, is in combining the overall policy setting at the top level of the University in respect to the decentralized way of governing and implementing policy plans. It means that if you want to set up an initiative, it allows much dialogue, many contacts at different levels at the University (Vice Dean).

It is noteworthy that decentralization and diversity in organization structure are supported and promoted by the efficient information technology system that enables lateral communication and collaborations throughout the institution. Furthermore, institution-wide communication and contacts at different organizational levels are maintained through a wide range of lateral coordination mechanisms including meetings, committees, etc. At this juncture, it is essential to reiterate the point discussed in the preceding chapter that the University created various fora where the entire academic community - students, lecturers, researchers, PhD students, postgraduate researchers, assistants, monitors, tutors, organizers of continuing education, administrative directors, Vice Deans of Education, Deans and the workers of the educational secretariat and (educational) supporting services - can meet and discuss common concerns and issues on the delivery of high-quality education (Gosselink & Pollefeyt, 2014). Notably, the fact that there is a lot of interaction and discussion within the academic community was widely acknowledged by interviewees. As an administrative staff member put it, “there is much dialogue, a lot of networks and connections between people within the University”.

The other important point that should be reinforced in the framework of this discussion is the involvement of faculty and students in the decision-making processes that makes KU Leuven a 'professor-run' and a 'student-driven' University. A senior leader noted in this respect:

> We are a truly professor-run institution, probably one of the most professor-run institutions in the country. Decisions are prepared, developed, conceived and implemented through the professor-run decision-making process. The structure of the University reflects this because of all the consultations that go on throughout the institution (Senior leader).

At the same time, KU Leuven is a "student-driven" University. As discussed above, students are represented in management bodies and educational committees, thereby essentially shaping the University's decision-making environment (see chapter 3). A senior administrator emphasized in interview that all important decisions of the University management are shared with students' representatives who have insight into all the facts and figures that one needs to know before the decision-making. As the senior administrator indicated, "if the academic leadership wants to push a point forward, they will have to convince students on content issues, i.e., not on authoritative issues. When it is important and applied to the whole University, the decisions are always made with students".

In the decision-making environment described above, students can express highly critical opinions. A senior administrator made this point by saying:

> We have a students' newspaper here, and it is very critical. KU Leuven has the most critical university students press that you can imagine. Why are students so critical? Because they had the same information before decision taking like all the other people in the Board of Governors. If they see that the decisions are coming that they do not like, they will bring in their arguments which have to be well supported. It makes for the culture of decision making on which students' interests are always connected to the interests of the University at large (Senior administrator).

On the whole, interviewees expressed the view that the organization structure energizes competition, both internal, i.e., within the University, and external, i.e., with research groups

and universities all over the world. In the opinion of a senior administrator, competitive processes permeated by free will are paramount to the University's advancement and success:

> You have to look at KU Leuven as having a structure of honeybees. When one collapses, the other will still exist and function perfectly. KU Leuven is very big, and it consists of a lot of autonomous cells. I think it distinguishes us from other universities – many cells and much competition – not only with other universities but also internally. I think the combination of autonomous cells and internal competition makes for very healthy little cells and successful people leading them. We are not a centrally managed organization. KU Leuven is more what they call in a biological environment a 'biotope'. There are a lot of autonomous cells – people, Departments, Faculties, Research Groups, Hospitals, spin-offs, LRD – and they are interacting with each other by their own choice. The combination of competition and free will is essential to the success of KU Leuven (Senior administrator).

In summary, the University has developed the efficient horizontal coordination mechanisms that foster bottom-up processes and joint decision-making within the institution-as-system. In effect, the University has created a structural framework that brings staff, faculty members, and students to work together as well as encourages them to foster innovation by creating the working conditions of trust, collegiality and academic freedom. As such, the organization structure is essentially linked to the organization culture discussed next.

5.3.3 Organization structure aligns with the organization culture

As outlined in section 2.7.2 above, organization structure and culture (core values and ideologies) act on each other and, through their interaction, influence organizational effectiveness and change. Accordingly, the alignment between organizational structure and values is one of the major factors contributing to the success of change initiatives. Overall, previous studies have shown that it is relevant to view organizational structure and values in relationship to each other. To reiterate the argument of Clark referred to previously: "organizational values ought not be treated independently of the structures and procedures through which they are expressed" (Clark, 1998: 8).

This doctoral study revealed a strong connection between the organizational structure and culture, i.e., deep-rooted values and fundamental ideologies that convey the University's

character. In effect, the alignment of the organizational structure with culture was found as very insightful for understanding and explaining transactional change in this academic setting. Also, this study identified clear influence of the University's culture upon the workplace climate (common perceptions of practices) that "develops from the deeper core of culture" (Ostroff, Kinicki & Muhammad, 2013: 644). It is important to mention at this point that for the purposes of this doctoral research, the primary focus is laid on climate as one of the key levers to transactional change in organizations. The organization culture in this study is addressed heuristically with the aim to gain insight into how the University's culture interacts with the organization structure in the framework of the broader institutional context as well as to get a better grasp of the climate dimensions that will be discussed later in this study. The essential aspects of the University's culture viewed through the lens of their interrelationship with the organization structure are outlined below.

The research findings indicate that the centuries-old history and traditions of the University are instrumental for understanding the institutional cultural identity. In effect, the University's historical background provides a lens for capturing an overarching set of values underpinning the institutional cultural profile. This study has shown that the essential character of the University shaped by its core values and assumptions is grounded in a long-standing tradition of ground-breaking innovative research and high-quality education with the focus on international excellence (see chapter 3). Accordingly, the University's espoused values and fundamental ideologies are associated with creativity, achievement, individual initiative, entrepreneurial spirit and the constant strive for quality being reflected in the institutional motto "Inspiring the outstanding". As pointed out in the University's identity and mission statement, the University "encourages personal initiative and critical reflection in a culture of idea exchange, cooperation, solidarity and academic freedom" (see Appendix 2). Further, the University places much value on stimulating participation of the academic community in critical discussion, thereby nurturing the culture of dialogue, the culture of quality, attention to the individual and individual freedom (Gosselink & Pollefeyt, 2014). Evidently, the University's organization and governance structure - exhibiting decentralization and autonomy of the institutional units while at the same time, ensuring their integration through the efficient coordination mechanisms (see chapter 3) - is consistent with the above-mentioned aspects of the University's culture that "makes accessible what is accepted and what matters at an institution" (Toma, Dubrow & Hartley, 2005: 27).

Multiple interviews with research participants further elucidated how culture is understood across the organization. Essentially, the engagement of interviewees in reflexivity on what matters in the University and how the institution works significantly helped the researcher to verify her basic interpretations of the organization culture, also from the point of view of relationship between organizational culture and structure. What has emerged clearly from the exchange of views is that the institutional culture is distinguished by respect for tradition and innovative ideas, pursuit for quality, academic freedom, autonomy of Faculties, collegiality, subsidiarity, entrepreneurial spirit and creativity. Thus, there was a shared agreement among interviewees that institutional members have great respect for the long-standing traditions of the University and at the same time, are open to new ideas. Furthermore, as follows from the interviews, this distinctive feature of the institutional culture is at the very core of the organizational structure that promotes out-of-the-box thinking, creativity, and innovation. As one of the interviewees noted:

> I think it is the culture of respect for the tradition – we are a very old University. We have valuable traditions. But there is also respect for innovative ideas, and there is an openness to think about new things as well (Vice Dean).

Further, many interviewees highlighted the intrinsic link between respect for traditions and pursuit of quality, i.e., the other important aspect of the University's cultural identity. Views were expressed that excellence in research and teaching being - rooted in the centuries-old traditions of the University - strengthen motivation of the academic community to strive for high quality and continuous improvement. As noted by a senior leader, "quality is also a question of pride because people are very proud of the University in which they work". In fact, previous research showed that historical roots and traditions strengthens institutional cultural identity that make organization's members willing to associate themselves with the institution and contribute to its growth and effectiveness (e.g., Toma, Dubrow & Hartley, 2005). Overall, research in higher education emphasize that traditions and history of an institution "fundamentally shape the effectiveness of that university. A strong and deep understanding of tradition and history is necessary for the academic social system to thrive…" (Fralinger & Olson, 2007: 86).

In line with the above, a recurring theme running throughout the interviews was the emphasis on trust that forges strong ties between the organization members and the University and, as a

result, inspires people to provide the highest quality they can. Further, there was a sense from many interviewees that the organization environment is designed to encourage experimentation, to allow people to work on pertinent initiatives, including Lcie, thereby showing trust and confidence in organizational members. This point of view is reflected in the following comment:

> Trust was one of the core concepts of our previous Rector. He found that it is very important to give people trust and space and time to start working on what they believe in. He wanted to bring the passion back to education. He found it very important not to have too many rules and procedures and to implement things top-down. This is very important also in the case of Lcie (Staff member).

Interviews indicated that trust and autonomy reinforce each other in this University. During interviews, a heavy emphasis was placed on autonomy that allows faculty members to develop their own education and change initiatives. Consistent with the above, many interviewees emphasized freedom to do things that lies at the core of this organization structure featuring autonomy and decentralization. A senior leader noted in interview that "people have much freedom to do things, so what we have to do is to create space to make this possible". Vice Dean was of a similar opinion:

> Within our University, the Faculties have much autonomy. We can initiate changes from within our Faculty. Of course, the University has its educational policy, it also has a policy on innovation, and we have to fit programmes and our work with the policy guidelines. But they are formulated quite broad so that we have much autonomy to implement it or to develop it in a way that is very specific to our Faculty (Vice Dean).

Further, interviewees highlighted subsidiarity as one of the defining cultural characteristics of this University. Essentially, the concept of subsidiarity "implies that decisions are best taken closest to where they are made operational" (McNay, 2007: 46). A senior leader of the University noted in this respect that subsidiarity - while being closely related to participation - empowers the lowest levels to make things can happen. This viewpoint is also reflected in the following comment:

> Because the University is known for its subsidiarity towards the Faculties, so there is not so much interference how I, for example, manage or govern this Faculty. At least, I have a feeling to have a lot of autonomy and discretionary power (Dean).

In addition, a view was expressed that the University policy places emphasis on creating opportunities for organizational members:

> The University wants to create opportunities for its members. It sounds maybe a bit overambitious but overall, if you go back to the past twenty-thirty years, the University policy always aimed at creating opportunities for professors and students of course. That is a kind of the underlined culture (Vice Dean).

In effect, the quotes above implicitly point out the attractiveness of the working atmosphere that affects dimensions of the organizational climate. Climate dimensions, in turn, are defined by the above-featured cultural tenets that create the organizational environment in which members of the academic community are trusted, encouraged and motivated to strive for excellence, nurture innovative ideas and act entrepreneurially.

Consistent with the above-mentioned features of the University's culture, many interviewees brought into focus collegiality as a strong characteristic feature of this institution. However, it was also admitted by interviewees that collegiality requires leadership frameworks. A Dean characterized this aspect of the organizational culture as follows:

> There is high commitment, high loyalty, very low turnover of people, strong dialogue, and collegiality is one of our five values in the school here. I would never select a value that is inauthentic or simply not in line with reality. So, it is a collegial culture, but the collegial culture needs a constant type of supervision. It needs to be anchored in the top layer of responsible people within the University (Dean)

Lastly, the inherent part of the University's character underscored in interviews is entrepreneurship and creativity. As indicated in the previous chapter, entrepreneurship has been historically promoted in this University; thus, determining the very core of this organizational setting. Accordingly, entrepreneurship and creativity were perceived by many

of the interview participants as determining characteristics of the University, in general, and the institutional culture, in particular. A senior leader stated:

> This University is very entrepreneurial in terms of its modus operandi, in terms of its behaviour. The culture of the organization is not just bottom-up – it is also highly entrepreneurial (Senior leader).

The opinion of a senior leader is very much in tune with another interviewee:

> This University is almost by definition an entrepreneurial University. This University does many things at a time, but it is definitely an entrepreneurial one. That is what you see also in the number of spin-offs, patent activity and so on. The University is very well embedded in the local industrial community. An increasing number of students show a strong interest in participating in this large entrepreneurial endeavour (Dean).

Overall, if to explicate the dominant cultural mode of the University by using McNay's quadrants discussed above (see chapter 2) - collegium, bureaucracy, corporation, and enterprise - the University exhibits a strong character of an enterprise, albeit the features of collegium - defined by the keyword 'freedom' - are also apparent. As indicated by McNay "the collegial enterprise is more driven by perceived *service* needs and tends towards allowing devolution, development and diversity" (McNay, 2007: 47; emphasis in original).

The discussion above suggests that the central features of the University culture – respect for tradition and new ideas, drive for quality, trust in the organization and its people, subsidiarity, academic freedom, joint decision-making, entrepreneurship and creativity – gained ground in the organization structure featuring diversification, autonomy, decentralization and effective balance between vertical control and horizontal coordination. Furthermore, a strong alignment between the University's culture and structure creates the work environment that fosters participation, creativity and innovation. In essence, the dominant cultural characteristics and the organization structure interact to create a set of dimensions around which interviewees perceive and describe climate within the University. This point will be revisited later in this study.

In summary, the research findings indicate that despite the inherent complexity, the organization structure is an essential factor contributing to transactional change within the University. The autonomy of the highly specialized units possessing their own developmental dynamics allows proactive action and flexible response to the environmental demands and at the same time gives the possibility to 'jump on opportunities' as they arise. The horizontal connections between the functional units along with the efficient vertical communication ensure integration of the units within the University system. Further, the organizational design encourages the autonomous units to develop their own capacity to respond to external challenges by energizing competition within and among the units. Finally, while reflecting the values underpinning the University culture, the structure creates a framework for directing energy, creativity, and resources and thereby provides a powerful impetus for launching and sustaining transactional change. It therefore follows from the above that the organizational structure fosters the emergence of transactional change initiatives such as Lcie.

5.4 Policy and procedures

There is a rich literature on higher education policy; however, institutional policies in higher education are rarely addressed as a focus of study. Even where they are addressed, researchers concentrate more usually on concrete policies, e.g., tenure or promotion, rather than on the concept of organization policy itself (Toma, 2010). Toma (2010) notes in this respect that "in reviewing the relevant literature on institutional policies in higher education, it is easier to summarize limitations than to identify insights. In fact, there is seldom even a clear definition of policy, whether it be practical or theoretical, especially in distinguishing the concept from implementation" (Toma, 2010: 121).

In the framework of this thesis, the definition of policy is adapted from Codd (1988) who defines it as "the selection of goals, the definition of values or the allocation of resources" (Codd, 1988: 235). Accordingly, this case study seeks to gain insight into how values and goals underpinning the educational policy viewed through the lens of the relationship with the organizational structure leverage transactional change within the University and thereby foster the implementation of Lcie. As indicated by Toma (2010) with reference to the work of Mazzeo, Rab and Eachus (2003), by exploring policies it is essential to understand how and why policies emerge and how organizational members respond to them (Toma, 2010). In what follows, the core themes that emerged in the course of this research refer to both the foundations of the University's education policy and the organizational response.

5.4.1 The policy takes hold in the University's strengths

As discussed earlier, the University's vision on education and the related policy emanates from the appreciative inquiry (AI) approach. The principal emphasis is on the positive, appreciation of an organization's strengths, engagement in collaboration and dialogue and search for inspiration in good practices. The essentials of the inquiry processes conducted by the University have been provided in the preceding chapter. This section highlights the major features of the education policy which, being informed by the AI approach, further the University's goals and cultural values expressed in the organizational structure and thereby buttress transactional change efforts such as Lcie.

By discussing the relevance of the AI approach to the development of the University's vision and policy on education, one senior leader highlighted the focus on the organizational strengths founded on quality and nurtured by a trust. A senior leader explained:

> Quality of education and more broadly, our University functions, is the foundation for building trust. What we have tried to do in the last four years is to shift from a low-trust to high-trust organization. It means you do not start from what goes wrong. You start from the strengths of your organization. I think that it fits quite well with appreciative inquiry – this is one big reason why we used this approach (Senior leader).

Notably, a move from programme evaluation to institutional review as a quality assurance mechanism exerted further influence on the University leadership to take the AI standpoint. A senior leader explained:

> The second reason is that in Belgium we have changed the approach to quality assurance, i.e., from programme evaluation to institutional review. There is no longer an external frame of reference with many checklists used to measure quality. Rather, in the institutional review, you create your own standards and your own quality and then you evaluate it in relation to your own ambitions. Thus, with the movement from programme evaluation to institutional review, you go away from the external control system that does not relate to the appreciative inquiry, in my view. You move from the external control system which is based on the lack of trust towards a system where you

> separate the internal quality care from the external quality control. And at that moment, it becomes possible to practice appreciative inquiry because it starts exactly from your strengths and not from your failures (Senior leader).

Several interviewees highlighted the relevance of a strengths-based approach in their daily work. For example, a senior member of the administrative staff remarked that a corporate relations office is "in a fortunate situation - we can do what we want. We have a Dean who believes in us. It is all about what is possible – it is not the discussion of the obstacles".

Significantly, the AI approach to the policy development based on the trust in the University's strengths created the ground for 'inspiration' and 'anchoring' – another critical theme to be highlighted in the framework of this research.

5.4.2 The policy encourages 'inspiration' and 'anchoring'

The principles of 'inspiration' and 'anchoring' that underlie the University's policy on education are essential for understanding both, the way the University does its work, and how the University engages stakeholders in change processes. A faculty member, a former Vice Dean and the Chair of the Institutional Review commission, explained these terms as follows (see Figure 5):

> When preparing for the institutional review, much attention was paid to how to present the way this University is working. And we tried to avoid the words centralized and decentralized. Bottom-up and top-down were not the right words as well. It is an inspiration that comes from the bottom. I will show you the picture. This picture characterizes the way the University is working, and also the way the quality control is being done here. That is the idea that we had: the University is here; then come the faculties, and then, for every programme, we have a Programme Educational Committee. Then we have the basic stakeholders, i.e., students, teachers, professors and supporting staff. Inspiration comes from them, i.e., from inside to outside. Here are strategic partners, society, education in general, and the working field. From outside to inside is called 'Verankering' or 'anchoring'. We discussed these words a lot. Again, the idea was that we did not want to use the terms bottom-up/top-down, and we did not want to use the terms top-down and decentralized as well. We thought these words would give the wrong impression (Faculty member).

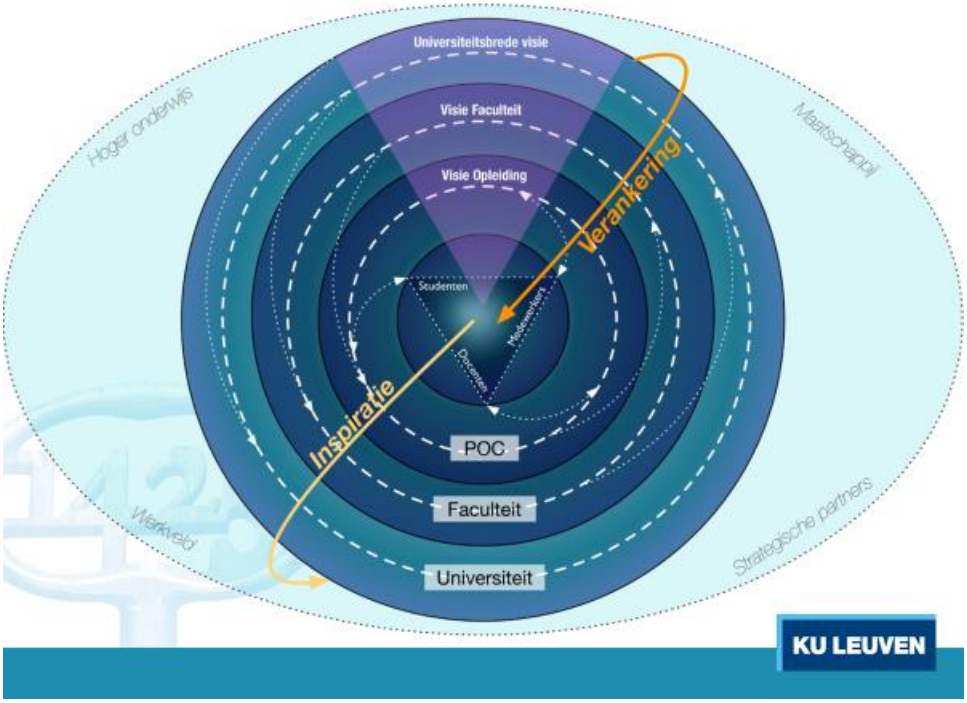


Figure 5. Dynamics of education policy at KU Leuven (Kritische reflectie, 2016).

A senior leader pointed out that the University furthers 'inspiration' and 'anchoring' by creating contexts and space for pertinent change initiatives such as Lcie. From his perspective, 'inspiration' and 'anchoring' were at the core of the implementation of Lcie. As a senior leader explained, there was an inspiration coming bottom-up from professors doing research and who tried to involve young people, and then it was anchored at some point in a programme (Lcie Academy). A senior leader summed up:

> I could give many examples of initiatives like this one - for example, service learning, identity portfolio for students. So, we have to listen carefully to what is going on and create contexts or spaces where wonderful things can happen (Senior leader).

In a similar vein, many interviewees emphasized the point that 'inspiration' and 'anchoring' are encouraged by institutional policy frameworks that set up an inspiring vision and then give room for their development and implementation. Vice Dean indicated this by saying:

> A particular initiative could be successful in one Faculty, and this initiative may not be working in another Faculty due to some specifics. However, you can learn from the overall set up. It really comes down to that: laying out an overall vision sufficiently

> inspiring but also sufficiently generic, so that it can be made concrete at the level of Faculties and Departments depending on their needs, their ambitions and their professional situations (Vice Dean).

Arguing along the same lines, a faculty member explained how the policy frameworks allow inspiration - that often comes bottom-up - to be anchored within the institution:

> Inspiration often comes bottom-up, and in many cases, it is a good inspiration which has proven to be useful at a certain place. Then the University says, OK, it is interesting for everybody – let us make a framework in the sense that it is not like a set of rules of how you should do it but a framework that says in a more general way how it can be organized. And Faculties will have to implement this (Faculty member).

It is particularly noteworthy in the framework of this discussion that inspiration can come from different sources. For example, benchmarking was a rich source of inspiration for the conceptualization and development of Lcie, as Dean pointed out:

> We started looking across borders, and I think that is a significant driver for change here. You could call it benchmarking or bench-learning whatever you like. What we did, we started looking at similar universities with similar initiatives to see if we could join forces. We developed a list of six to seven partner universities, and it immediately became clear that they had delineated and specialized trajectories in entrepreneurship education – that was something we lacked at that time (Dean).

Ultimately, as a senior leader put it, “encouraging inspiration also means that you have to be entrepreneurial because otherwise, you will kill inspiration”.

Summarizing all the above said, it is important to emphasize that ‘inspiration’ and ‘anchoring’ as distinctive features of the University policy on education essentially shape the intra-organizational dynamics and thereby transactional change processes in this organizational setting.

5.4.3 The policy fosters dialogue

'Inspiration' and 'anchoring' are reinforced by a continuous, committed dialogue that is at the core of the institutional life. By way of example, it is essential to note that the entire University community was engaged in the preparation of the education policy plan as well as into the discussion of the transition from programme evaluation to institutional review. As indicated by senior leader, there were about 150 meetings with all the members of the Faculties involved in education including all Programme Directors and Vice Deans for education. "Everything was explained, discussed and sometimes adapted. It was a very intense process to discuss the institutional review system as a whole and to bring everybody on the same line".

Of note, by explaining how dialogue is created within the University, a senior leader also referred to the diagram previously discussed with a faculty member (see Figure 5):

> We are a very complex organization. So, it is correct to ask how you can create dialogue. The answer is here. There are different levels at the University. You have the inner circle that embraces teachers, students, and collaborators who create a programme. The programme is controlled or taken care of by an Educational Committee. The next level is the concern of Faculties, and then you have the University level. At the top is a student and her or his programme. There is a strong interaction between the different layers of the University. After a long discussion, we called it 'inspiration' and 'anchoring'. These are the two concepts we use for the dynamics of dialogue. Inspiration comes from students, teachers and from everywhere - the Catholic principle of subsidiarity is important. What is essential for other levels is anchored and become available for the whole University. The dynamics of dialogue is present in the program and among the different layers of the University. That is, very shortly, how we create the institutional dialogue (Senior leader).

A member of the administrative staff gave a pertinent example of how dialogue is initiated and supported within the University:

> Now there is a topic under discussion about the structure of the academic year. A professor of philosophy is leading this change initiative. I think he has done fifty interviews thus far with all the Units, Faculties, Vice Deans. Considering all

> perspectives on this change project, he will work out some proposals, and then the discussion will start again. A couple of years ago, a working group was created to discuss this issue, but it was decided not to change things. Now it is coming up again from different angles, e.g., students, Educational Council, Vice Deans. So, the Vice Rector on educational policy decided that we will work on this project again in a more profound way (Staff member).

It is important to note that the Policy Plan for Education that will determine the educational policy from 2018 onwards aims to reform the academic year based on the assumption that it will contribute to the development of the efficient educational environment within the University. Evidently, by involving the academic community in the institution-wide dialogue, the institutional policy makes a significant impact on change processes within the University.

In the framework of this discussion, it is worth mentioning frequently voiced concerns that constant dialogue requires time, patience and can be counterproductive. For example, Dean mentioned that a constant dialogue is vital in this type of a comprehensive University, but it takes time and requires patience. As he said, "sometimes it is a handicap that the University is so huge with many initiatives. Every Dean's meeting brings five-six new things happening and being presented, you could be overwhelmed by them".

Furthermore, it was a recurrent theme throughout the interviews that bottom-up decision-making processes, collegiality, and permanent dialogue are strength and a weak spot at the same time. From the perspective of the Dean, the weakness lies in the fact that sometimes it takes years to put something forward on the agenda because of a slow process of dialogue and the need to convince others: "Almost everyone wants to have a say in every initiative you have launched, and it is good because it is a signal of commitment but sometimes it also slows down. It is a balance that you need to find in this type of organization".

Similarly, a senior leader noted that the bottom-up culture might impede decision-making processes - that is, decisions might get stalled or need to be continuously revisited. However, the advantage is that once decisions are made, they will be absorbed and implemented. Considering the above, a pivotal role of leadership comes to the fore, ensuring that the bottom-up processes do not lead organization-wide decisions. From this perspective, a senior leader explicitly stated that "bottom-up processes and the leadership are two closely

connected dimensions in the organization. When they find one another, they can generate much progress". On the whole, despite the recognition that continuous University-wide dialogue can cause tensions which might arise from differing views on the issue under discussion or slow down processes and even impede change, there was an underlying agreement among most interviewees that dialogue is of paramount importance in this organizational setting.

In summary, being in line with the tenets of the AI approach, the University policy amplifies the goals and values underpinning its organizational culture and expressed in its organizational structure. Building on the organizational strengths, putting trust in the organization and its members, encouraging university-wide participation in the policy setting and fostering inspiration**,** the policy frameworks leverage transactional change processes in two significant respects: first, by laying out generic, inspiring vision that encourages new practices and ideas and, second, by making room for their development and implementation.

5.5 Management practices

The preceding discussion suggests that the policy and procedures, while being interrelated with the organizational structure, essentially foster transactional change dynamics in this organizational setting. This section delves into the role of management practices in promoting transactional change processes within the HEI.

5.5.1 Combining planned and emergent approaches to change

The study revealed that the transactional change processes by implementing Lcie were energized through a combination of planned and emergent change approaches. The difference between planned and emergent change was detailed in the literature review chapter. In the main, what differentiates one approach from the other is the underlying assumptions about how to introduce and manage change in organizations. Planned change implies a top-down approach while being programmatic by nature. Goals and objectives of planned change are developed and articulated at the outset. Conversely, emergent change suggests a bottom-up approach while being powered by ideas and engagement of participants.

The findings of this research indicate that initially Lcie was developed as a planned change initiative. As explained by a manger, the initial plan was to create an Entrepreneurial Centre

coupling all the initiatives on entrepreneurship within the University, e.g., the coaching sessions organized for the researchers by the technology transfer office; the initiatives of professors starting to introduce entrepreneurship in the curriculum. The manager mentioned that all these individual initiatives were isolated, so it would be relevant to combine their strengths and align these efforts. However, in the course of time the implementation focus shifted towards facilitating the emerging change process:

> We executed this plan for about two years. Then we reached an epiphany moment when we discovered that the way we had been approaching it was not the right way. After realizing this, the entire process was shifted towards a more entrepreneurial way. We said, *'we involve the students more'.* So, we created *a 'community'*… (Manager).

Arguing along the same lines, a senior leader underscored the challenge of introducing planned change in this organizational setting. The senior leader explained that the University long ago started thinking about how to stimulate students who wanted to engage in entrepreneurial activity. He reiterated the point mentioned above that Lcie was first conceived as the Leuven Center for Innovation driven Entrepreneurship. There were many discussions, but nothing happened because individual Faculties wanted to run this initiative. As the senior leader indicated:

> It was like a sterile discussion until April 2014 when we met some students early in the morning here in Leuven. The students told us: we have a project; we want to start incubating. Then I said: look, the Center will become 'community', and we will give ownership of all the things to students' associations. And all of a sudden, you see that much dynamism occurs. Today we have about sixty-five student teams that are incubating. They have created an ecosystem - we support this ecosystem. Now the Faculties are on board but a sharing board because they understand that the ownership of the initiative is with the students. This is also what I mean with the exogenous idea here: let us get it away from the Faculty ownership and let us give it to students' associations to own it (Senior leader).

Essentially, many interviews highlighted the importance of changing the name of the initiative from *'Centre'* to *'Community'* as one of the key factors that helped to overcome barriers to introducing change. Thus, conceptual language became an important means of fostering

transactional change dynamics within the University. This finding is in line with the propositions from the academic and empirical literature that conceptual language of organization change is one of the central factors that directly impact on the intra-organizational change dynamics, particularly in an HE setting (see chapter 2). Dean noted in this respect:

> At the very beginning, Lcie stood for '*Centre'* and not for *'Community'*. A centre is always formally located in the organization, and of course, you start putting up borders, boundaries, and limits. Changing the name to Community and explicitly articulating the idea that we want to create this Community from the whole student population across Faculties, Groups, and Departments, certainly helped to realize what we currently have. So, it was more a question of opening a dialogue trying to make clear that there is something in it for everyone which was also a learning process for ourselves (Dean).

Overall, the evidence from the interviews suggests that the development of Lcie was a dynamic, complex and highly interactive process underpinned by a variety of activities, approaches and various occasions. A Dean highlighted this point by saying that the implementation of Lcie was far from being a linear process of consecutive events. Rather, "it was more a kind of hybrid set of individual and separate incidents which at a certain moment got interconnected and created a strong platform".

In line with the above, interviewees provided further insights into how various undertakings became interconnected and moved Lcie forward through the efficient combination of planned and emergent change approaches. Notably, Van der Voet, Kuipers and Groeneveld (2016) contend that planned and emergent change may be productively combined if the direction for change is provided from the top and the content and meaning of change is created from the bottom. Indeed, a bottom-up approach and top-down endorsement jointly framed and enabled the initiative being studied. For example, a staff member noted that "Lcie started bottom-up with students who did it voluntarily and extra-curricular who believed in it but at the same time it was integrated into the educational philosophy, educational policy plan, so it had top-down support". Similarly, a senior administrator and a faculty member observed that Lcie had both, the students' support and that management support; so, it was a bottom-up and a top-down initiative at the same time.

Interviewees made a special note about the importance of a balance between a bottom-up initiative and top-down support as a prime trigger for the transactional change processes within the University. A manager emphasized this point during the interview as follows:

> We managed to strike a good balance between a bottom-up initiative (leveraging human capital of many individuals at our University) and top-down endorsement illustrated by the fact that the General Manager of the University is the Chairman of our steering committee, and that many aspects of entrepreneurship are adopted in the University's Educational Policy Plan (Manager).

In fact, by implementing Lcie the management followed, even if unwittingly, Kotter's eight-step change model (Kotter, 1996). To quote a manager:

> If you look at his model of eight steps for transformational change, there is a nice correlation with the timeline and approach that we have adopted. In hindsight, I think, we are following Kotter's theory nicely, albeit that we were not aware of it until now. But as in most cases: it often helps if you can show that the methodology you are using has already been demonstrated to work (Manager).

Further, Kotter's model has been also used to develop a University-specific approach to implement and sustain educational change, as the quote below indicates:

> Many Programme Directors are struggling to introduce change in their own programs, i.e., how to get people on board. So, we developed a tool around change management that can help them reflect on the change process, and how they can start it and deal with it. We developed this tool based on Kotter. We created two models for use. One depicts different steps in the change process (e.g., establish a sense of urgency; create the guiding coalition, etc.). Based on the cases, we developed concrete tips and examples of how you can do this in our University (Staff member).

The interviewees' comments above challenged the initial assumptions of the researcher about the development of the transactional change processes in the University. Thus, Kotter's eight-stage change model is traditionally associated with a planned change being driven from the

top and representing a linear and sequential change approach (e.g., Higgs & Rowland, 2005). Conversely, the previous discussion with interviewees featured the implementation of Lcie as a dynamic and non-linear process defined by the complexity of emergent events and activities. In view of the above, the researcher took a reflexive approach that in this case means "working with a framework involving a set of potential lines of thinking and theoretical ideas for how to understand a subject matter, rather than a definitive theoretical formulation and privileged vocabulary for grasping it" (Alvesson, 2003: 25). Indeed, as Rees and Hall (2016) suggest, the final two steps in Kotter's model encourage organizations and their members to develop attitudes and values that will promote the behaviours supportive to future change. Further, the authors argue that it is essential to develop a change-proactive organizational culture that will facilitate the creation of a feedback mechanism, thereby transforming a linear change model into a continuous process of development and change. Accordingly, a common modification to Kotter's and similar sequential models in practice is "to introduce an additional process at the end, which provides a feedback step from the final to the initiating stage. With this modification, these models describe a cyclical and continuous change management system" (Rees & Hall, 2016: 114).

The reflexive considerations and responsive interaction with interviewees informed the interpretation of the empirical data. Based on this, the doctoral research provided further evidence to suggest that Kotter's model and the emergent change approach are not mutually exclusive – both were effectively applied in this organizational setting. If used as an analytic tool, Kotter's model provides a helpful frame of reference for those managing and participating in the change process. A staff member noted:

> When we use Kotter's approach, we do not say that you should start with step one, and two, and three, and when you go to eight everything is finished. We use it as a kind of a framework to make people think about the process. When the change is more emergent, you cannot plan everything ahead, but still, you can think about, for example, if you communicate enough with people to create ownership and get them on board. The model is more inspiring I think (Staff member).

In summary, the findings indicate that planned and emergent change mutually reinforced each other and, through their interactive dynamics, energized and fostered the transactional change processes underpinning Lcie. At the same time, the practice and research suggest that it is not

an easy issue to manage change by using both planned and emergent approaches (e.g., Sminia & Van Nistelrooij, 2006; O'Brien, 2002; Balogun & Hope Hailey, 2004). From this perspective, the findings of this research spotlighted the vital role of change agency - defined here as an individual, a team or an organizational unit promoting and accelerating the implementation of a change initiative. In what follows, the study concentrates on how change agency triggered transactional change processes in this organization setting.

5.5.2 Crafting transactional change with change agents

It is widely recognized among researchers and practitioners that change agents can contribute to organizational development in different ways, particularly, by driving and sustaining emergent change efforts (Buchanan & Boddy, 1992; Lichtenstein, 1997: Weick & Quinn, 1999; Burnes, 2009; Kickert, 2010; Van Poeck, Læssøe & Block, 2017). A senior leader also expressed the opinion that change agents played important role in implementing Lcie:

> For me, this is very important - whenever you try to change something you need a change agent. It is very difficult to implement change in a legitimized manner up front within the university, at least in our institution. You need to build it and develop it. That is the same with Lcie (Senior leader).

Traditionally, there has been a tendency towards a unified approach or a one-dimensional perspective centred on skills and competencies of a generic change agent who can fit any situation (Caldwell, 2001; Caldwell, 2003; Burns, 2009). Caldwell (2003), however, calls for a deeper understanding of change agency phenomena and suggests delineation of different change agency models and the variety of change agent roles respectively. Thus, Caldwell (2003) proposes a fourfold classification of change agency models, i.e., *leadership*, *management*, *consultancy*, and *team models*. Within the *leadership models* change agents are associated with senior leaders who initiate strategic, far-reaching change. Within *management models* change agents are middle managers and functional specialists who carry out or support strategic change within business units or key functions. C*onsultancy models* highlight the role of external or internal consultants as change agents who facilitate change by providing advice, expertise, etc. Within the *team models* change agents are represented in organizations by teams that may function at a strategic, operational, task or process level (Caldwell, 2003).

The results of this study are basically in line with the proposition of Caldwell (2003), thus revealing the significant role of change agents - leadership, management, and teams – in fostering transactional change within the institution. At the same time, the findings indicate that the phenomenon of change agency can be explored through a further analytical dimension, namely, an autonomous, strategically positioned organizational unit. Accordingly, in what follows the study looks at the change agent roles through the lens of four analytical dimensions being categorized under the headings: autonomous strategic unit; team; leadership, and management.

The autonomous, strategic unit as a change agent. As an autonomous, highly specialized unit and at the same time, part of the University system, LRD is well positioned to forge productive collaborations between faculty members and external stakeholders to foster new ideas and innovative projects. The research findings suggest, that acting as a powerful change agent, LRD has become what Lippitt, Watson and Westley (1958) call a "leverage point" for fostering development and change within the University. Thus, a senior leader expressed the opinion that LRD acts as a mighty change agent in this organizational setting:

> I think that LRD is a giant change agent within the University. I keep the hospitals away now because the hospitals constitute a very different environment, also in terms of funding. They have patients, we have students. But within the University setting, the most important change agent for me is Leuven Research & Development. Because you give professors, who are entrepreneurial a vehicle, a mechanism, a lever for change. Also, because we have built an eco-system with quite some links to venture capital, to funding agencies, etc. And you can mobilize this (Senior leader).

Notably, many interviewees highlighted the crucial role of LRD in making Lcie a success. For example, Vice Dean emphasized this fact by saying that "one of the key points to the success of Lcie is that Leuven Research & Development supported this initiative." On the whole, the findings highlighted LRD as a mighty change agent that fosters transactional change in a variety of ways, e.g., by creating linkages between Faculties and Departments, advancing collaborative research with industry, fostering partnership and networks. In so doing, LRD essentially energizes transactional change processes within the University by bringing exogenous forces into play. As indicated by a senior leader, LRD creates an 'exogenous factor effect' on stimulating change in this organizational setting:

> It is also exogenous because if you have four or five venture capitalists who work alongside with LRD, if they want to invest in one of your spin-off companies, the University cannot say anything about that. It is good that they want to invest, we see money, that happens, and then I see much change being mobilized and materialized (Senior leader).

Therefore, by performing multiple change agent roles as well as by providing an exogenous influence on change processes, LRD makes a decisive contribution to fostering transactional change dynamics within the organization-as-system.

The team as a change agent. As discussed above, student organizations are an authoritative source for development and change within the University. In the Lcie case, student organizations created a 'team of teams' that acted as a strong change agent in this organizational setting. A mighty impact of students on the University's dynamism and transactional change processes respectively came out as a constant theme throughout the study. The research findings suggest that the University would never launch an initiative before having enlisted support from students. As a senior administrative staff member put it, "we never do initiatives when students do not support them because you will put many efforts into implementing the initiatives and you will never get results".

A former student who highlighted the significance of students' organizations in fostering Lcie, at the same time made it clear that the success of Lcie was a direct result of the synergetic effect of the driving forces underpinning the implementation of this initiative.

> The other driver is the existing platform of students' organizations that are linked to the various Faculties as well as across-Faculty students' organizations like AFC (Academics for Companies), Academics for Development (AFD), etc. They were already there but operated on their own. Our Lcie coordinator just went to them and said: *'why don't we combine our efforts'*? Thus, you need the key enabler, i.e., the Lcie coordinator. You need to have your own platform (i.e., intrinsic motivation for change), and you need to have a broader platform of all students recognizing the need for entrepreneurship, the need for extra-curricular activities. As long as your people

> have a mindset of - *'we will do our study programme, and that is it'* - the initiative like Lcie will not work (Former student).

Reinforcing the above comment, a former student underscored the importance of interdependence between the existence of crucial enablers driving for innovation within the institution and the entrepreneurial character of the University actively promoting innovation and change. He expressed the following opinion:

> You have a couple of key drivers who are pushing forward and are heard by other people who are in the right position. All change management is probably like this: change starts with a couple of key drivers and not just with a Board of Directors deciding that today we are going to change. You need those key enablers. That is the way it works. We had a couple of key enablers at KU Leuven driving for innovation, and they made of KU Leuven an innovative and change recognizing school (Former student).

Overall, the research findings suggest that students practised, in Caldwell (2003)'s terms, 'change agency as a team process' (Caldwell, 2003), thereby fostering the creation of a dynamic network of change teams across the University. Furthermore, students acted as self-managed teams whose complex interactions were efficiently facilitated by the Lcie coordinator and supported by the University leadership at the strategic level.

Leadership as a change agent. Leaders can perform a variety of change agent roles, e.g., providing empowerment (Kotter, 1999), creating a vision (Bennis, 1993), acting as strategic architects (Prahalad & Hamel, 1990) and innovators (Kirton, 1980), to name a few. This research explicated the role of leadership from another angle, focusing on how leadership creates an environment through which transactional change occurs. From this perspective, interviewees highlighted the centrality of the University leadership in creating the organizational conditions for making change happen. The main emphasis was placed on 'showing support for exploring new ideas' and 'enabling a protective environment for change' as two mutually reinforcing factors that facilitate development and change in this organizational setting.

There was a sense from many interviews that the University leadership is committed to creating an environment open to the productive exchange of ideas "ensuring that people are challenged to find their own answers and that they are supported in doing this" (Higgs & Rowland, 2005: 127). From this perspective, one senior leader noted during the interview that "policymakers are kind of servant leaders" in the University.

Consistent with the above, a Dean characterized the University leadership as "a kind of serving leadership or supporting leadership, i.e., not pushing the idea but always opening a dialogue".

It follows, therefore, that the change leadership style deviates significantly from traditional, top-down management approaches and acts as such, as a powerful enabling factor for 'participative' change which is characteristic for the academic setting. Notably, this distinct feature of the university leadership was highlighted by a staff member as a strength of KU Leuven:

> Hierarchy? There is one, but it is quite informal. If I have an idea, I could send it to the Rector by email, and he would reply. Probably he would forward it to Dean, and the Dean would discuss it. People are very open and informal. If I compare with other universities, then I think this is a very strong point of KU Leuven (Staff member).

This comment of a staff member stimulated the researcher to operate reflexively by looking at the research data from the perspective of competing conclusions. As previously mentioned, a senior administrator highlighted hierarchy as an inhibiting factor to the transactional change processes within the University. Adopting a reflexive stance allowed the researcher "to organize, compare, and validate alternative interpretations" (Malterud, 2001: 486). Essentially, the reflexive approach enabled the researcher to get a perspective on the role of the University leadership in mitigating hierarchical organizational structures through creating conditions for creativity, entrepreneurial thinking and participative change.

Overall, the research findings suggest that the key intention behind the leadership change strategy is to stimulate broader thinking about how to foster innovation and entrepreneurial attitude, thereby activating the academic community for transactional change. This strategy is aligned with a respective change management approach defined by one senior leader as

‘stealth innovation’. A senior leader explained that in order to implement a successful project in the academic setting it is important to start working with a coalition of willing people and then diffuse the pilot results across the organization. This approach helps to convince the academic community in the relevance of the change effort and thereby facilitates transactional change processes in the organization. The senior leader expressed the opinion that in order to make change happen “either you need an exogenous factor, or you need to make change a bit undercover. When you see that the pilots are working, it will become more public, and people will start embracing it. That is the way I have learned to deal with change. Because if you want to do it up front, you are entering into a long process with so much interference that you will never get there”.

The findings indicate that ‘stealth innovation’ can be operationalized in different ways in this organization setting. From the perspective of the senior leader, it is especially important to ensure a ‘protected environment’ for change. In his opinion, specific strength of this approach is that it has a profound effect on fostering organization change capacity:

> You have to make sure that the change can happen in a bit of a protected environment. And the exogenous factor allows you to have a protected environment. The stealth innovation I was referring to also allows you to have a protected environment. And then, of course, the capacity for change occurs because we have some quite entrepreneurial faculty members who want to engage and who want to develop the change trajectory. But it must be done in the right way (Senior leader).

This view of change capacity development provided significant insight into the issue of capacity building in universities as organizations. Notably, Toma (2010) points out that there is a rich literature on transforming organizations, but less attention has been given to developing the organizational capacity needed to implement change, particularly in an HE setting (Toma, 2010). This University emphasized the importance of a ‘protected environment’ for developing organizational change capacity, in fact, a distinct capacity building strength of KU Leuven. Admittedly, there is an inherent tension in ensuring a ‘protected environment’ for change. However, as a senior leader indicated, tension fosters change capacity – the lack of tensions would potentially engender a decline in entrepreneurial activities. To quote a senior leader:

> Sometimes you need to go outside the mainstream organization and then bring it into the mainstream organization. That is what I would call the unique capacity for change in Leuven that we are able to do so. But this requires leadership that gives the degree of freedom to do so. And that is a continuous tension, but of course, the tension also brings the capacity to change. Because if you would not have the tension, there would not be a lot of entrepreneurial initiatives, probably (Senior leader).

During interviews, another emphasis was put on 'disruption' as one of the major factors affecting change within the institution. In essence, creating conditions for disruptive change is interrelated with ensuring a 'protected environment' for change. The research findings suggest that both approaches have broad application within the University as powerful ways to foster transactional change in this organizational setting. In the opinion of a senior administrator, disruption was one of the crucial factors by implementing Lcie:

> You have to get OK from your central management, you have to start there. But then your modus operandi is to mind the structures not too much. Just start doing it, and when necessary, despite the structures. That is the disruptive element. Sometimes you have to do things that are not in accordance with the official policies. But what it does it creates your first success, and it is very important. If I look at Lcie, the most problematic part was the first two or three successes because often they were booked on not following the rules. If you have those, you have to go back to the central management – this is what we have achieved already, please make us the official community, in this case, of entrepreneurial students (Senior administrator).

A faculty member looked at the disruptive change practised by the University from another angle indicting that members of the academic community try to learn from best practices, also inside the University. As the faculty member mentioned, "some faculties pioneer on certain aspects and get room to do that even if it is outside the mainstream organization. But the idea is that if it works others can learn from your experience and can implement it as well".

In summary, the study revealed several practical strategies taken by the University leadership to spark, facilitate and trigger the change in this academic setting. At the same time, as Toma (2010) notes, "successful leadership requires effective management – and vice versa" (Toma,

2010: 47). The following sub-section focuses on the role of management as a change agent in dynamizing transactional change within the University.

Management as a change agent. Peter Drucker (1954) compares a manager to the conductor of a symphony orchestra "through whose effort, vision and leadership, individual instrumental parts that are so much noise by themselves, become the living whole of music. But the conductor has the composer's score: he is only interpreter. The manager is both composer and conductor" (Drucker, 1954: 341-342). By discussing the role of management in implementing Lcie, interviewees pointed to the crucial role of the Lcie coordinator who took on the role of both composer and conductor - to stay with this fitting metaphor. A former student noted:

> We started discussing the project with the students from the Faculty of Business and Economics, and within one or two months all parties were at the same table because the organization, i.e., KU Leuven, was behind it. But I have to say that it has happened because the innovation manager was an employee of the University. If it was a less inspirational person and not him … It is like a chicken and egg situation: is it your organization that is so entrepreneurial, or is it the right person who was able to change the organization? In this story, it is more or less the second one (Former student).

Notably, the change literature explicates a diversity of roles that a change agent can undertake. Thus, Rogers (2003) succinctly captures the critical roles of a change agent including to develop a need and intent for change in clients, to exchange information, to identify problems, to turn intentions into action, to sustain adoption and prevent discontinuance (Rogers, 2003). Van Poeck, Læssøe and Block (2017) developed four ideal types of change agents, i.e. Technician, Convincer, Mediator and Concerned Explorer. Each of these types takes on different roles to carry into effect corresponding change agency practices. Change agents as Technicians can act as managers, counsellors or experts; Convincers can function, for instance, as interpreters, inspirational leaders or set good examples; Mediators can take on the roles of a networker, facilitator, initiator or mobilizer; Concerned Explorer could be an awareness raiser by calling attention to the issue or acting as a visionary (Van Poeck, Læssøe & Block, 2017).

Essentially, the change agency roles differ significantly depending on the nature of implemented change. Thus, managing emergent change concerns primarily redirection of

what is already underway (Weick & Quinn, 1999; Kickert, 2010). Accordingly, it is important for a change agent to recognize emergent change, make sense of it and by managing language, dialogue, and identity frame the change processes (Kickert, 2010). Furthermore, wicked or unstructured problems – as it was in the case of Lcie (see chapter 3) – particularly require non-linear change agency practices in which one of the major challenges is to perform a wide range of change agency types and roles (Van Poeck, Læssøe & Block, 2017).

In effect, the change agency types and roles highlighted above underpinned the change agency practice of the Lcie coordinator who took on the role of an inspiring leader, a networker, a facilitator, to name a few. Thus, by bringing passion to the initiative, the Lcie coordinator sparked and fostered transactional change throughout the University. As a staff member noted, "the Lcie manager has much passion – he believes in entrepreneurship education. And he got the possibility to start working on it to make his belief more realistic and concrete".

One interviewee mentioned that the Lcie coordinator played an important facilitating role - he engaged students by giving them a sense of ownership of the initiative thereby involving more and more people in the change process. The following quote illuminates this point:

> He sees himself as a facilitator. He facilitates the ownership of the programme by students themselves. And over time, he gets more and more people on board who believe in it and want to be a part of it. A small community is growing (Staff member).

The staff member also mentioned that the Lcie coordinator took on a convincer role. As she noted, the Lcie coordinator starts small, and as soon as successful initiatives and good practices are underway, they inspire and motivate other people to join them. The staff member emphasized that "it is important to have someone like our Lcie coordinator who keeps investing and collaborating and seeing links and making people clear that there are links with other initiatives".

In his role as a networker and a catalyst of change, the Lcie coordinator was described by interviewees as having created a network of relationships by the efficient exchange of information, mutual support and interactive actions. A staff member noted in this respect that

"the Lcie manager is investing a lot in networking, in being in all the right places to make the Lcie concept recognized and that people know about it".

In line with the above, a former student characterized the Lcie coordinator as an effective communicator who efficiently engaged the academic community in dialogue and discussion on how to join forces for the efficient implementation of Lcie:

> Our Lcie coordinator communicated with all faculty members. He talked to Deans of the Faculties, i.e., *'how we can do that'*. Then the students' organizations came to the table. The Lcie manager is a huge driver, and he worked hours and hours to do it by himself. KU Leuven owes him so much. The University is so lucky to have one person to do it all (Former student).

Of note, Shein (1996) introduced a theoretical concept of a change agent as a 'good role model' arguing that through socialization activities change agents can inspire and keep people excited about the ongoing change. Van Poeck and colleagues (2017) investigated the relationship between this theoretical concept and empirical observations (Van Poeck, Læssøe & Block, 2017). The findings of this doctoral study provided additional evidence in support of the viability of the concept of a change as a 'good role model'. By engaging with a variety of change roles and leading by example, the Lcie coordinator stimulated co-operative thinking and co-searching for ways of implementing Lcie and thereby, essentially energized transactional change processes throughout the institution.

5.5.3 Fostering transactional change dynamics through the implementation tactics

As follows from the interviews, the Lcie implementation tactics significantly affected transactional change across the University, particularly through the effective organization of processes, efficiency in using resources, and active involvement of the academic community. Tactically, the Lcie management used a combination of implementation approaches and, by synergizing them, mobilized institutional members for change. Key insights from the interviews on the implementation tactics of the Lcie initiative are summarized below.

Developing a vision. As discussed earlier, developing and sharing and clear vision, i.e., a picture or image of the future (Senge, 1998), is an essential characteristic of the University as an organization whose institutional policy is grounded in the inspiring vision on

education. Accordingly, by implementing Lcie the management put a strong emphasis on the creation of a shared vision. A manager emphasized that it is important "to create a vision that can only be materialized if the stakeholders involved believe in it".

Bootstrapping methods of implementation. The findings of this research are consistent with the proposition of Kaplan (2000), who contends that organizations with capacity (for a change) find ways to implement pertinent ideas or new initiatives despite limited resources. In line with the above, interviewees underscored the point that although financial resources are important, transactional change processes can start without significant financial investment in this University. As is evident from the interviews, Lcie was launched without any significant funding. Being developed by LRD that works outside the Faculty structures, Lcie had a tiny budget. However, budget constraints were not perceived as having hindered the initiative due to the creativity and resourcefulness of the Lcie management. A manager expressed the following opinion:

> Scarceness triggers creativity. I see many initiatives that fail although they are very well funded, and I do not mean that in a bad way. But if I would have got five hundred thousand euros to start this project, maybe I would have done a big thing I do not know. But it would have looked completely different, and I would certainly not have involved students in a way that we have done it here. Because working actively with students was kind of a creative approach, an attempt to find buy-in within the student population (Manager).

As a result of the above-mentioned, it was crucial to embed entrepreneurial DNA into the way of working in order to enable the implementation of Lcie:

> At some point in time, we decided that it would be good to have our own incubator – a place for students who want to be entrepreneurial. At that time, there was no place where students could come together to work on their entrepreneurial projects. Normally, we would have looked for University funding or ask for an empty building. But the University did not have a spare building that could be used for our purposes. Thus, together with the support of students, together with a small grant of the local province, together with a bit of extra funding from the tech transfer office, we were able to collect a small starting capital. It was big enough to do something but small

> enough to keep us on edge. We always had to convince other people to help us. That was our entrepreneurial DNA at work (Manager).

Since the study revealed that entrepreneurial attitudes and techniques are essential for enhancing transactional change dynamics in the academic setting, it is worth citing a concrete example of how the entrepreneurial approach to implementing Lcie worked in practice.

> We needed an incubator building, and we found such a building. An older part of this building was vacant for a long time since it had not been kept well. So, it was a cheap solution for us to rent the old part of this building, but the building needed renovation. The University wanted to help us, but there was no budget for a complete renovation. Since we could not afford to pay the amount of money required in an official way, we talked to students, and together, we designed our own blueprints. We told the landlord that we could upgrade his building if he would pay the costs. We leveraged a bit of budget that way. And in less than eight weeks we did the entire renovation of the incubator building together with several motivated students. We were entrepreneurial. And this created a mindset among the students of: *'hey, these people are really entrepreneurial.'* So, you foster the culture of what you want to achieve with the student population, and that is important (Manager).

At this juncture, it is essential to re-emphasize the strong characteristic feature of the University, namely: budget constraints do not limit the ambitions of organizational members to realize their aspirations and foster relevant activities. Instead, budget constraints unleash the creative energy of faculty and staff members to use available resources most efficiently. For example, senior administrator and a faculty member mentioned during the interview that the lack of money is a challenge, but it fuels creative thinking on how to reach goals with available resources:

> We make use of the Erasmus finding. Every semester I try to have one person from the Corporate Relations Department to go abroad. We try to be part of networking, e.g. themed networking groups. Also, we approach people who come from abroad to visit KU Leuven, and I ask them to meet people from corporate relations. So, we need to be very creative because there is not much funding to travel (Senior administrator and a faculty member).

Creating synergies. One of the essential aspects of the managerial tactics by implementing Lcie included building synergies between Faculties, Departments and various initiatives, also those that had been already underway. Developing relationships and bringing multiple parties together required time and essential managerial skills. Ultimately, this tactical approach made a crucial contribution to moving Lcie forward by leveraging human capital, as the following quote suggests:

> When we started Lcie, the goal was to coordinate to some extent whatever is done in the field of entrepreneurship in the University. We learned along the way how to build bridges to stakeholders as well as how to leverage their human capital…. We create synergies by coupling things that normally would also be successful independently. But the whole is larger than the sum of the parts. For example, IusStart, TechStart are kind of independent initiatives within the University, and they could exist independently as they did. But coupling them into a broader framework of entrepreneurial projects creates a higher service level around it because you start from an eco-system (Manager).

Bringing together managerial and faculty values. As discussed in the literature review chapter, academic institutions are generally characterized by a cultural gulf between faculty members and administration (Chaffee & Jacobson, 1997). From this perspective, successful change in universities is premised upon the alignment of managerial and faculty values, so that faculty and staff can join forces for organizational change and development. To that end, it is important to provide all the relevant information about the reasons for the initiative, its nature, what difference it would make for faculty and staff, the incentives, and patterns of involvement (Peterson, 1997). The Lcie case supported the propositions made above. By explaining the goals and objectives of the initiative, the Lcie coordinator managed to convince faculty members of timeliness and pertinence of this change effort. A Vice Dean noticed:

> Lcie coordinator as a person is really helpful to keep in mind what the objectives of Lcie are as well as to understand what happens within the Faculty. LRD has a good perspective on what is going on at different Faculties, what is going on with regards to innovation. I think you need someone who tries to translate it to the Faculties as well (Vice Dean).

Overall, the findings suggest that the Lcie management fundamentally shaped the change initiative by co-thinking and co-creating Lcie together with faculty members and consequently, affected the desired transactional change at the system level. Vice Dean mentioned in this respect that "Lcie coordinator approached different Faculties, he was willing to explain and to think together with the Faculties how to implement the initiative in a way that fits Lcie as well as the objectives of the Faculty, i.e., how to make it Faculty specific".

Introducing change without forcing things. As follows from the above, the management did not force the implementation of Lcie but engaged faculty members in co-creating change. As Vice Dean put it:

> I think this is one of the success factors that they were not so strict, i.e. "let's take it or leave it." They were flexible in thinking about how we can implement it and how we can find the way to offer it to students that fits the learning objectives and the goals of a specific curriculum (Vice Dean).

In effect, the approach described above is characteristic for management tactics used to foster change in this organizational setting, as the quote from a staff member suggests:

> If we want to introduce a specific topic at the program level, we do not go to the programme and say you must change things. Instead, Vice Dean or Programme Director would say, for example, 'I want to integrate more writing skills for students in my program.' Then you sit together with the Vice Dean and resistant people and open a dialogue asking them to give reasons for resistance. We try to get them on board slowly, i.e., without forcing things. We may initiate a working group around this topic and invite resistant people to participate in this working group to hear their opinion. The point is not to ignore them but to involve them (Staff member).

Information and transparency. As indicated by Toma (2010), communication performs an important linking function within organizations, particularly in universities as loosely coupled systems in which the units are not always connected with each other (Toma, 2010). From this perspective, interviewees highlighted a significant role of coaching sessions

and Lcie meetings in creating a community of colleagues that facilitated the implementation of the change effort. A staff member noted:

> We (the Faculty of Engineering Technology) offer colleagues a course in coaching twice a year, also business coaching, to improve their entrepreneurial attitude and to raise their awareness that there are other things next to the technical competences. I think it works very well because it creates a community of colleagues who are working on the same task and have the same mindset (Staff member).

Interactive interviewing and direct involvement of research participants in a reflexive process encouraged the staff member to elaborate on techniques and approaches to fostering communication processes. Thus, in the course of the conversation, the interviewee placed emphasis on the development of what she termed 'communication pages' to indicate multiple and iterative mechanisms that were used to exchange information and engender interest in this change initiative.

> We develop communication packages as I call them. I think Lcie meetings are crucial. We do it once in three months, but they are very helpful. Within our Faculty, we arrange business coaching for colleagues from our campuses who are willing to join Lcie and to deal with entrepreneurship. Now I try to set up an online community within our Faculty with our business coaches and entrepreneurial students as a flexible platform where we can exchange information and experiences (Staff member).

In fact, the concept of 'communication packages' and related discussion helped the researcher to get a better grasp of how permanent dialogue and interaction among the University members works in practice.

Accomplishing and celebrating 'small wins.' Weick (1984) points out that small wins, i.e., concrete outcomes of moderate importance, may appear to be insignificant; however, a series of wins may attract allies and diminish resistance to future proposals (Weick, 1984). Thus, "once a small win has been accomplished, forces are set in motion that favour another small win" (Weick, 1984: 43). Likewise, many interviewees underscored the point that 'small wins' had a snowball effect on the implementation of Lcie. For example, a staff member

mentioned that people did not know much about Lcie at the very beginning. But the first successes, e.g., Lcie Academy, brought students on board and unleashed 'the snowball effect'.

A snowball effect was premised upon extensive information and thereby visibility of Lcie. A former student highlighted this issue by saying that "visibility of the initiative was an important driver to join it." This point was reinforced by a faculty member who said that when the initiative becomes visible and has a positive momentum, everybody wants to be part of it.

Furthermore, a Dean drew attention to the importance of a step by step approach as a prerequisite for implementing change within the University:

> It is important in this University to have patience at the beginning, but then suddenly it speeds up. I do not have the feeling that things are too slow here. But what is important is perseverance. In the beginning, it is always difficult if you want to scale something up to the whole University. It requires a step by step approach. But as soon as people buy in it goes extremely fast. I think if you take all stages together, we are not slower than more top-down organized universities. And we have strong embeddedness of new initiatives thanks to the dialogue and the slower approach at the beginning (Dean).

In line with the above, one of the critical issues raised during the interviews was the importance of establishing a small group of believers who are willing to collaborate on the change project. A Vice Dean expressed the opinion that at the very beginning, "it is really a matter of selecting the believers, choosing your partners carefully, going for some small-scale pilot project and then, when you have successes, make sure that they are communicated effectively". Similarly, a senior administrator emphasized the importance of the first success in bringing people on board. From his perspective, it is the quickest way to implement the project like Lcie in the organization like KU Leuven. As he mentioned, "the most difficult thing is to create the first success. If you have that, you create a second success and you use it to widen what you are doing, for example, with Lcie. But the first success is the most difficult".

Therefore, starting small, booking results and making them visible to the academic community were crucial to making Lcie a success. Furthermore, some of the interviewees expressed the opinion that it is important to recognize and celebrate achievements. From this perspective, the research findings suggest that it is a well-established practice within the University to celebrate achievements as a means for rewarding and keeping people involved. A senior administrative staff member noted in this respect:

> Within our team, we celebrate small things. Next week we will have a celebration because 1500 vacancies have been uploaded on a platform. A couple of weeks ago, we had a celebration because we got more than 100 business projects from companies. We have monthly meetings where we discuss general things. Within the corporate relations group, you cannot monitor the workload. Sometimes the workload is enormous, so you need to keep people motivated, to keep them together. It is also one of the ways of valuing the personnel (Senior administrative staff member).

Based on the above, the findings of this research are generally in line with Burke (1995) who underscored three factors that are important for sustaining momentum of the ongoing change, namely: to inform people continuously about the change effort, especially by reaching decisive milestones; to celebrate achievements; and to try out different ways of rewarding people for the relevant changes they make (Burke, 1995).

By way of summary, it is important to reiterate that the entrepreneurial character of the University, with its emphasis on creativity and innovation, determine the organizational spirit and change management practices respectively. As Peter Drucker (1954) pointed out: "A mean spirit in the organization will produce mean managers, a great spirit great managers. A major requirement in managing managers is therefore the creation of the *right spirit in the organization*" (Drucker, 1954: 119). The research findings suggest that the organizational spirit most influences creativity and innovation underpinning management practices in this University setting. Thus, by engaging the academic community in the new developmental effort (Lcie), the management practices drive transactional change processes through a wide range of mechanisms of change. They include setting a direction for change by communicating inspiring vision; using multidimensional models of change agency; enabling a 'protective environment' for change; bringing together managerial and faculty values; creating synergies; celebrating small wins; fostering individual, group and organizational

change dynamics by exposing values intrinsic to the University character. In so doing, the management practices reinforce the fostering impacts of the organization structure and policy frameworks on the transactional change dynamics underpinning Lcie.

5.6 Work climate

The findings indicate that the University's structure, policy, and management practices reinforce one another and thereby exert a strong mutual influence on the organizational climate. Put another way, the organizational structure, policy, procedures, and management practices – while being rooted in the organization culture - create a frame of reference for the attitudes, perceptions, and behaviour of the organization members and thereby conjointly affect the organizational climate.

The findings of this research featured a work climate at the University as a multi-layered phenomenon, thereby being in line with the climate literature (e.g., Schneider & Reichers, 1983, Tierney; 1999). Evidently, the autonomous entities, Groups, Faculties, and Departments have their own composition and a way of working that influence their attitudes, modes of interaction and patterns of behaviour (Isaksen *et al*., 2001). From this perspective, institutional work climate is context-specific and context-related, as the quotation suggests:

> We try to streamline some processes through horizontal coordination within the organization but in the end, people belong to the Institute, Department or Faculty. This means that the organizational climate is a bit layered in terms of concept. Climate is so local – it is really what happens in a particular unit. For instance, the composition of the groups can be very different. There are places where you have a lot of technicians and places where you have no technicians. This creates another climate. This is another type of interaction you have (Senior leader).

Consistent with the above, another senior leader highlighted the existence of many climates in the University. The leader underscored the point that when different groups come together, they create a specific atmosphere that distinguishes them from other groups. As the senior leader noted, "subsidiarity makes people responsible for merging teaching and research, for example. Students are involved in the decision-making process. All this creates different climates". In the opinion of the senior leader, it is the strength of the University that it does not have one climate.

The study revealed that multiple climates featuring respective atmosphere within each work unit are mostly framed by the cultural values that are reflected in the governance and organization structure, policies, procedures, and management practices. Furthermore, the synergetic relationship between work unit climates and the institutional culture has a direct bearing on the overall institutional climate and vice versa.

By discussing a work climate as it is perceived by organizational members, interviewees highlighted the features that - following the climate literature - characterize a change-conducive climate (Porras & Hofer, 1986; Porras & Robertson, 1992; Tierney, 1999). For example, Tierney (1999) points out the characteristics that underpin a change-conducive climate as follows: (1) a general willingness to break with status quo and move in a new direction; (2) a high level of trust among organizational members that allows them to feel secure by bringing about change, i.e. by deviating from the established ways; (3) operational freedom that allows to engage organizational members in experimentation; (4) openness of communication, so that people can voice concerns and share ideas and information; and finally, (5) employee development. Regarding the last point, Tierney (1999) indicates that by "enhancing employee skills, the organization is capitalizing on the prospect that employees will not only recognize change opportunities when they emerge but will also have the capacity and confidence to take such opportunities" (Tierney, 1999: 121-122).

In what follows, the research findings will be presented from the vantage point of the above-mentioned organizational factors comprising a change-conducive climate. For the purposes of this study, these factors are clustered into three major themes as they emerged from the qualitative data analysis.

5.6.1 A trust- and freedom-led climate

As previously discussed, freedom to act is a distinctive feature of the University's culture and an essential characteristic of the organizational arrangements, i.e., structure, policy, procedures, and management practices. In turn, the institutional culture and the organizational arrangements have a significant impact on the individual attitudes to change and patterns of behaviour respectively. As a faculty member put it:

> If you ask me about change… give me some freedom, that is important. We need to be free to start exploring ideas with other people. And trust is part of freedom (Faculty member).

An administrative staff member emphasized that freedom to launch pertinent initiatives and test new ideas provide a strong impact on climate perceptions and patterns of behaviour.

> For me is important that I do have much freedom in determining what my professional and personal goals are. No one told me a few years ago that I have to work on entrepreneurship. This is something that grew out of projects I did, and I could create my own part of how to do it. And it was supported. There is much room for taking initiatives and for implementing your ideas (Administrative staff member).

Vice Dean particularly underscored the relationship between an open culture that encourages collaboration, the organizational structure and freedom of professors to act.

> It is up to an individual professor whether to establish collaboration, and it is not a problem to do that. Indeed, the structure at the level of the University is there to support those collaborations. But it really starts with an individual, and from this point of view, everything is possible. There is an open culture that stimulates collaboration, but it is up to individual people to find the right way to do that (Vice Dean).

Overall, the findings have shown that there is a strong linkage between the organizational climate, individual motivation and behaviour for change as the research literature indicates (e.g., Burke & Litwin, 1992; Tierney, 1999). Furthermore, this doctoral study provided additional confirmation of the fact that dynamic relationship and interactions between leadership, teams and organizational members underpinned by trust and academic freedom significantly affect psychological climate (the individual perceptions) and organizational climate (the shared perceptions about the workplace environment) thereby sustaining a climate for creativity and innovation discussed next.

5.6.2 A climate for creativity and innovation

As follows from the interviews, trust and academic freedom foster the creativity of organizational members and thereby establish an innovation-conducive working atmosphere

within the University. In this respect, interviewees emphasized several points that relate to the essential characteristics of the organizational structure, policy, and management practices.

Results of this research indicated a strong relationship between the psychological climate and change-supportive organizational arrangements. The latter fosters the development of a proactive mindset and thereby provide a sustainable foundation for transactional change processes within the University. Vice Dean noted:

> The promoting factor is that the University is changing all the time. So, you have to be quite flexible in adapting and picking up new ideas (Vice Dean).

Further, the policy frameworks nurture the climate for creativity and innovation by engaging organizational members in University-wide discussions and exchange of ideas on pertinent issues relating to institutional development and change. A faculty member provided the following example:

> In 2014, when the new policy on education was made, each faculty received finances to develop their own educational projects. The Policy Plan put forward fifty operational goals. And as a Faculty, we could choose in which operational goal we would like to invest. One of those goals was entrepreneurship, and we have chosen that one out of the fifty. We thought it would be interesting for engineering students (Faculty member).

Managerial tactics enhance creative climate(s) through flexible approaches that support experimentation and improvisation of organizational members, thus stimulating change to emerge. As a manager put it: “We have learned that if you structure things too much, you can kill creativity and innovation”.

In the framework of this section, it is relevant to re-emphasize two factors, discussed above, that play an important role in advancing climate for creativity and innovation within the University, namely: benchmarking or learning from best practices and development programmes for faculty and staff members.

As indicated by Slater and Narver (1995), openness to learning partners is a critical dimension underpinning the architecture of the learning organization (Slater & Narver, 1995). This proposition is fully applicable to the University's context in which learning from internal and external partners is firmly embedded within the learning-supportive organizational infrastructure. A faculty member noted:

> We can try things out, but then we try to learn from best practices, also inside the university. Individual Faculties pioneer on certain aspects and get room to do that even if it is outside the mainstream of the organization. But the idea is if it works well others can learn from your experience and can implement it as well (Faculty member).

A senior administrative staff member gave the following example of how learning from best practices is stimulated within a Faculty:

> I think it is important that people look at other practices in Belgium and abroad. They should know what is going on in other places. So, when they have an idea, and there is free will, I ask colleagues to summarize on one page the most important points for a discussion. If I have the feeling that the idea is well founded, and it has potential, I go to the policy people. But it could be also the other way around (Senior administrative staff member).

Regarding development programmes and training courses, the findings pointed out their important role in advancing individual skills and competencies that help organizational members to recognize the need for change and take relevant actions. Notably, this finding is consistent with the proposition by Tierney (1999) quoted above in this section. Furthermore, a friendly and participative learning atmosphere underlying the implementation of those programmes fosters creative thinking and thereby makes an essential contribution to nurturing the change-conducive climate at the individual, group- and organization levels. From this perspective, a staff member gave a relevant example of how a flexible approach to involving people in training courses shapes the climate for learning and change in this organizational setting:

> We have a training course for novice professors on different topics. In the early days, it was entirely voluntarily. But now, as a beginning teacher, you have to join such a

> course. And we noticed that not all teachers participate voluntarily. It was a changing context for us as we encountered a significant resistance from some teachers. Then, we tried to get them on board very slowly - we started working on where they are at the moment. Some teachers get very far in training, some may become convinced to change something in the end but do not do it yet, or they start to realize that there are other perspectives on the topic. Anyway, we do not try to force things as far as our training is concerned (Staff member).

In summary, the climate for creativity and innovation is intrinsically linked to the innovation-supportive infrastructure that encourages people to identify best practices, join proactive development programmes, share ideas and effectuate collaborative learning processes across the institution. All these factors interrelate and lead to the formation of a climate oriented toward participation discussed in the following sub-section.

5.6.3 A climate oriented toward participation

There was a shared perception amongst interviewees that the working environment within the University can be characterized as a climate of participation. It is essential to note that a primary issue of debate in the climate literature, as Denison (1996) suggests, is whether climate refers to a 'shared perception' or a 'shared set of conditions' (Denison, 1996). Accordingly, Denison (1996) contends that "research on organizational climate would require the measurement of both objective organizational conditions and the individual perceptions of those conditions" (Denison, 1996: 624). The findings of this doctoral study pointed out a direct link between the organizational conditions and shared perceptions of these conditions by the academic community. To quote a staff member:

> Indeed, the aspect of participation is crucial. You have much freedom to determine your own goals and to control your own calendar. Your opinion is appreciated and heard (Staff member).

Vice Dean noted that climate of participation is empowered by the system-driven support for the exploration, development, and implementation of new ideas:

> The climate of participation? Yes, I agree. If you have an idea, then people will encourage you to explore possibilities although there could be limitations sometimes, e.g., in terms of resources or fit in the University policy (Vice Dean).

Remarkably, interviewees particularly emphasized the vital role of the organization structure in fostering collaborations throughout the University. An administrative staff member emphasized the point by saying that "a climate of collaboration is in the structure of the organization". Various structural aspects were highlighted at that, mainly, multiple mechanisms of horizontal coordination supported by professional management services discussed above.

Overall, interviewees were convinced that the atmosphere at a workplace fosters participative climate(s) within the institution. One senior leader commented:

> It is the atmosphere at the University where colleagues are interested to participate in fine-tuning the processes (Senior leader).

At this juncture, it is essential to reinforce the point made by a senior leader that participation and bottom-up processes should be efficiently managed, "making sure that there is some coalescence of the bottom-up on moving forward." Similarly, Cohen, Fetters and Fleischmann (2005) draw attention to the importance of participation and empowerment of skilled organizational members. At the same time, the authors point to the challenge of managing participation in an academic setting. As previously discussed, participation and bottom-up decision-making is a strength and at the same time, a weakness of the University. Nevertheless, the essential characteristics of the organization and governance structure, policy frameworks, leadership strategies, and tactical management efficiently shape those processes, thereby establishing and leveraging the organizational climate for participation and change.

On the whole, it is essential to note that the organizational climate of freedom, creativity, and participation sometimes creates 'productive tensions,' as the following quote suggests:

> In terms of climate, sometimes it is conflicting. Sometimes we are struggling. We have a good governance model, i.e., a good equilibrium between a central policy setting, on the one hand, and a decentral implementation and freedom to act. And it sometimes

> creates frictions at the climate level. Sometimes at the level of Departments or Faculties you feel restricted, you feel somewhat put down by some higher hierarchy (Vice Dean).

At the same time, as previously discussed, constructive debates and productive tensions, in fact, typical for creative, innovative and participative climate(s), are essential drivers of entrepreneurial activities and energizers for transactional change within the University.

In summary, the research findings revealed a substantial impact on the transactional dimensions, i.e., organization structure, policy frameworks, and management practices, on work climate of the University. By exposing fundamental values and underlying assumptions of the institutional culture, organization structure, policy frameworks, and management practices establish an innovation-conducive climate which in turn, creates favourable conditions for launching and implementing transactional change initiatives including Lcie.

5.7 Analysis across themes

The preceding sections examined five themes: Antecedent Factors, Organization Structure, Policy and Procedures, Management Practices, and Work Climate. In what follows, the study offers analysis across the themes and their components intending to outline their relationship as well as to trace their significant influences on transactional change processes within the University.

The study suggests that **the antecedent factors set the foundation from which transactional change starts** – that is, by energizing, accelerating and/or impeding change within the University. In essence, the exogenous, or outside, factors shape the reasons for organization change and further on, exert promoting effects on the emergent change processes. The exogenous pressure, mainly, the changing societal context and the need to compete for government funding was found to be most influential among the exogenous change-promoting factors. University autonomy and the supportive environmental context leverage the power of the exogenous pressure. Conjointly, the exogenous antecedents significantly amplify the transactional change in this organizational setting. Alongside the exogenous antecedent factors, the study spotlighted several endogenous antecedents exerting a positive impact on transactional change processes. Some of these factors were conceptual in nature; others were related to the organizational specifics of the University. Together these

factors create a powerful context that advances organizational capacity to handle the evolution of emergent change within the University. In addition to the change-promoting antecedent factors, the study revealed several endogenous factors that inhibit transactional change in this organizational setting. On balance, the dialectical interplay of promoting and inhibiting antecedent factors, both exogenous and endogenous, is recognized as intrinsic to the transactional change processes within the University.

Against the backdrop of the above-mentioned influence of the antecedent factors, the study explored the role of organization structure, policy frameworks, management practices and climate in enabling and sustaining transactional change in this organizational setting. The study revealed that the above-mentioned organizational dimensions, individually and in synergy, mitigate the adverse effects of the antecedent factors and at the same time, optimize the change-promoting antecedents, as indicated below.

Organizational structure stimulates transactional change within the University. Significantly, the organization structure fosters out-of-the-box thinking and creates conditions for incubating transactional change in the institution. In so doing, differentiation, decentralization, and diversity engender proactive action and entrepreneurial spirit of the academic community and thus internal and inter-organizational competition. The effective balance between vertical control and horizontal coordination ensures equilibrium in the organization, opens up creative possibilities for the organizational members and allows for bottom-up decision-making. By ensuring visibility of change initiatives through horizontal coordination mechanisms, the structure gets the academic community aligned with targets and content of the emergent change efforts, thereby making organizational members receptive to new ideas and proposals. Lastly, the interrelationship between structure and culture levels the structural differentiation and diversity within the organization by sustaining values intrinsic to the University identity, i.e., respect for traditions and innovative ideas, drive for quality, individual freedom, subsidiarity, creativity, and entrepreneurship. Overall, the organization structure facilitates the mutual reinforcement of individual and organizational purposes. The organization structure is a potent energizer for transactional change in the University.

Policy frameworks foster transactional change dynamics within the University through the reinforcement of goals and values featured in the organization's culture and structure. By consolidating trust and nurturing the pursuit of quality across the institution, policy, and procedures enhance the identity-based motivation of the University community to build up

strengths coupled with the commitment to continuous improvement. The principles of 'inspiration' and 'anchoring' - being chosen deliberately in order to avoid such terms as top-down/bottom-up or centralized/decentralized decision-making - activate the intra-organizational change dynamics by laying out a generic, inspiring vision that encourages entrepreneurial attitude as well as by giving room for the implementation of new ideas. In this framework, the university-wide dialogue promotes "organizational self-discovery" (Kezar, 2001: 114). Also, continuous dialogue makes people feel that change is not imposed on them, rather they are an indispensable part of change processes. As a result, policy and procedures mobilize the social energy within the institution-as-system, thereby vitalizing implementation dynamism for new practices and consequently, transactional change processes.

Management practices shape and sustain transactional change within the University. The creation of synergy between planned and emergent approaches to change trigger interaction of intra-organizational networks and thereby dynamize evolutionary change within the institution. Further, multidimensional models of change agency have a combined effect on the transactional change dynamics: the tech transfer office (LRD) and students as change teams provide exogenous impetus for change; the University leadership shapes the protective environment for change and creates conditions for 'stealth' innovation; management motivates organizational members for change by carrying out a variety of change agency roles. The managerial tactics of 'participation' and 'persuasion' (Caldwell, 2003) promote synergies between Faculties, Departments and various initiatives that were already underway before the launch of Lcie and ultimately triggers transactional change processes by communicating an inspiring vision for change. Essentially, management practices boost the effects of the organizational structure and policy frameworks on transactional change processes within the University.

Organization structure, policy frameworks and management practices create a change-conducive work climate. The study indicates that the University's structure, policy frameworks, and management practices reinforce one another and mutually impact on the organizational climate. By maintaining fundamental values, aspirations and guiding principles of the institution, the organization, structure, policy frameworks, and management practices encourage people to take the initiative and thereby establish the psychological climate that shapes individual attitude to change. Experimentation and improvisation - while being encouraged and supported in this organizational context - enhance the participative work

atmosphere. The latter instigates collaborative processes across the institution, creates productive tensions in the academic community and thereby accelerates transactional change dynamics within the institution-as-system. Altogether, structure, policy frameworks, management practices, and the working climate shape the organizational environment that fosters transactional change within the University.

In summary, the convergence of the antecedent influences, organization structure, policy frameworks, management practices, and work climate is recognized as crucial to instigating transactional change in HEIs. Taken together, the antecedent factors and the above-mentioned transactional dimensions create an environment that makes transactional change occur in this organizational setting. A conceptual diagram illustrates the arrangement and relationships between the five themes and their components identified in this study (see Appendix 1).

Comparatively speaking, the current study supports, deepens and extends organization change literature and at the same time, brings forth additional insights into the transactional change phenomenon in an HE setting. Thus, the findings reinforce several core propositions of organization research including the following (see literature review chapter): (1) it is important to view organization change from a systems perspective (e.g., Johnson, 2004; By, 2005) based on the assumption that organization change as a dynamic process is influenced by the interaction of various interrelating components within an organization and its environment (e.g., March, 1981; Soparnot, 2011; Dawson, 1994; Burke, 2014); (2) planned and emergent change are not exclusive and can be efficiently used in combination (e.g., Burnes, 2004); (3) organizational discourse plays a significant role in fostering development and change (e.g., Marshak, 2002; Marshak & Grant, 2008); (4) it is essential to shift the focus from the 'negatives' (fixing the problem) to the 'positives' (organizational strengths) by implementing change in organizations (e.g., Bushe, 2011); (5) efficiency in building organizational capacity is premised upon a systemic approach targeting all levels of the organization-as-system (Morgan, 2005; Fullan, Hill & Crévola, 2006) - an organization's world view and belief system play a crucial role at that (e.g. Kaplan, 2000); (6) implementing change in loosely-coupled systems require particular approaches adjusted to their organizational specifics (e.g., Weick, 2001; Burke, 2011); (7) organization change is promoted by differentiation and integration in organizational structuring (e.g., Lawrence & Lorsch, 1986; Dill, 1997a), a balance between vertical control and horizontal coordination (e.g., Bolman & Deal, 1991) as well as by the alignment of organization structure and culture

(e.g., Gumport, 1991; Clark, 1998). More about the contribution of this research in the organization change literature is provided in subsequent sections. At this juncture, it is essential to emphasize that the insights and evidence from the current case study deepened the above-mentioned propositions about organization change including an HE setting.

Above all, the study offers additional insights into the nature of transactional change in institutions of higher education. The study provides evidence to suggest that antecedent factors significantly impact on transactional change in an higher education context and thus require consideration in the Burke-Litwin model. Since change processes in universities are complex and hazardous, furthermore, universities are most conservative in changing the way they work, efficiency in introducing transactional change is conditioned by antecedent factors, both exogenous and endogenous. Especially, the role of exogenous factors as levers for change in HEIs cannot be underestimated. Therefore, by generating transactional change processes in an HE setting it is essential to factor in the implementation strategies that build on the antecedent factors that provide exogenous support for new ideas and, on that basis, help mobilize all levels of the organization-as-system. Further, taking into account distinctive characteristics of universities as organizations, such as the loosely-coupled nature of an HE setting, the autonomy of faculty members and other related features, success in university change depends to a great extent on the antecedent impact of the internal contextual characteristics. From this perspective, the internal contextual characteristics of the University - including the world view, institutional attitude and organizational professionalism - essentially impact on how the idea of change is perceived and interpreted by the academic community. As such, the antecedent factors provide the foundation for introducing and fostering transactional change in the organization and therefore, need to be considered as an important determinant affecting the evolution of the emergent change in HEIs.

The insights and evidence from this research led to the proposal of a 5-dimension model of transactional change in higher education institutions (see Figure 6). The model evolved from the analysis of the Burke-Litwin model and multiple interviews with research participants.

Figure 6. The 5-dimension model of transactional change in higher education institutions.

The proposed model distinguishes five dimensions that provide a crucial impact on the transactional change processes in universities: antecedent factors, organization structure, policy frameworks, management practices, and work climate. The model is premised on the assumption that these dimensions are mutually complementary as they instigate, frame and develop transactional change in institutions of higher education. The model emphasizes the fact that the evolution of emergent change in universities is significantly influenced by antecedent factors, exogenous and endogenous, that in essence set preconditions for organization change. Especially exogenous antecedent factors provide a strong impetus for transactional change by exerting pressure on HEIs to change. Furthermore, the model features a mutually complementary effect of the critical enablers of transactional change, i.e., the organization structure, policy frameworks, management practices, and work climate. These factors amplify transactional change dynamics set in motion by multifaceted antecedent influences, both individually and in synergy, and ultimately, make transactional change occur. Overall, the 5-dimension model draws attention to the sources and drivers of transactional change in an HE setting, explains why these dimensions are integral to the process of change and thereby, offers a perspective on how to optimize their role in fostering transactional change in academic settings. As such, the model provides a useful framework and an analytical tool for strategizing, instigating and managing transactional change in universities as organizations.

5.8 Summary

The research findings highlighted the major role of the antecedent influences on the origin and evolution of transactional change in academic settings. The impact of the exogenous factors on dynamizing transactional change in universities is particularly apparent. Mutually reinforcing effects of the antecedent factors, organization structure, policy frameworks, management practices, and work climate provide acceleration of the evolution of emergent change by energizing transactional change processes within an HEI. For all the above reasons, the study suggests adapting the Burke-Litwin model to the higher education context. The proposed 5-dimension model of transactional change in institutions of higher education extends the transactional components of the Burke-Litwin model by placing emphasis on the antecedent factors as essential preconditions for making transactional change occur in universities as organizations. The research findings suggest that the 5-dimension model can be

used as a framework and an analytical tool for strategizing and managing transactional change in academic settings.

CHAPTER 6 CONCLUSION

6.1 Introduction

The scope of competitive pressures and pace of changes currently being faced by universities urge them to accelerate internal change processes. The need to enhance efficiency and market responsiveness, the introduction of reforms unleashed by 'new public management', the changing composition of the workforce including the emergence of 'third space' professionals and related developments, require universities to operate under challenging and continuously changing conditions (e.g., Becher & Trowler, 2001; Deem & Brehony, 2005; Fumasoli, Gornitzka & Maassen, 2014; Whitchurch, Locke & Marini, 2019; Veles, Carter & Boon, 2019). As a result, ongoing systemic changes for continuous development have become the new imperative for universities as organizations. In this setting, higher education institutions (HEIs) are increasingly confronting the need to engage the university community in incremental changes to elevate performance throughout the organization. Yet, the university as a unit of analysis has not been extensively investigated so that many aspects of organizational change processes in higher education remain understudied.

This research aimed to enhance an understanding of the transactional change dynamics in universities as organizations. The goal was to interpret and to explain how transactional change – incremental, evolutionary change for continuous improvement usually associated with daily operations – occurs in institutions of higher education. To that end, the study addressed the transactional dimensions of the Burke-Litwin model – organization structure, policy and procedures, management practices and climate – to look at their role in creating an environment conducive to change in an HE setting. To delve deeper into the transactional change phenomenon within an HEI the study examined the impact of exogenous and endogenous antecedent factors on the organization change dynamics. Within the overarching research focus, the study paid particular attention to several issues that were highlighted in the theoretical and practitioner literature as areas that need further investigation such as: how exogenous factors facilitate organization change; managerial approaches to foster the evolution of emergent change; the role of organizing arrangements and management practices in enabling and sustaining continuous change in universities as loosely coupled systems; and

the organization of entrepreneurial universities as an enabling factor for institution-wide change.

The purpose of this chapter is to examine the key findings in relation to the research questions underpinning this study. After a discussion of the findings from the research questions perspective, the chapter highlights the implications of the study for theory and practice followed by suggestions for future research.

6.2 Discussion of research findings

Intending to enhance an understanding of the transactional change dynamics in universities as organizations, the study investigated the central research question "How does transactional change occur in universities as organizations?" From this perspective, the study sought to grasp the role of organization structure, policy frameworks, management practices, and climate in enabling and sustaining organizational change as well as the likely impacts of the exogenous and endogenous antecedent factors on the transactional change processes within an HEI. The focus mentioned above determined the formulation of the Sub-Questions for this study. A recap of the Sub-Questions (SQs) is provided below.

In attempting to get insights into the antecedent influences on transactional change processes in an academic setting, the study addressed the first SQ - *What antecedent factors promote or inhibit transactional change in this organizational setting?* From this perspective, it was essential to identify the crucial antecedent factors, both exogenous and endogenous, that provided major effects on transactional change dynamics within the University. In relation to the second SQ - *How does organizational structure induce transactional change?* – the study focused on the cornerstones of the organizational design that facilitated and advanced transactional change in the academic setting. In exploring the third SQ - *How do policy and procedures relate to the organizational structure?* – the study aimed to exhibit the key aspects of policy and procedures, particularly those that bare a relationship to the organizational structure. In responding to the fourth SQ - *What are the management practices through which transactional change occurs?* – the study concentrated on the managerial strategy and tactics that had a strong relevance for energizing and fostering the evolution of emergent change in the university-as-system. The fifth SQ - *What are the likely impacts of structure, policy frameworks, and management practices on work climate?* – framed an understanding of the

relationships between the organizational arrangements and a change-conducive climate at the individual, group and organizational levels.

The following discussion of the key research findings is structured around the central themes underpinning this research.

Theme 1: Antecedent factors

The research findings revealed the crucial role of the context antecedents, both exogenous and endogenous, in instigating transactional change in an academic setting. Among the most potent exogenous antecedent factors, the study featured prominently the changing societal context that triggered student demand for change; the need to compete for government funding; University autonomy and the regional environment conducive to innovation and entrepreneurship. These external factors were identified as having a strong promoting impact on the transactional change processes within the University. By exerting pressure for change and creating an environment conducive to change, these antecedents significantly fostered transactional change in this organizational setting. It is noteworthy that there is a rich body of literature on the impact of the external environment on the institutional change including universities (e.g., Eckel, Hill & Green, 1998; Weber, 2002). The Burke-Litwin model being rooted in the open system theory highlights the input from the external environment as a fundamental factor for organization change. In a similar vein, research in higher education conceptualizes universities as open systems being significantly affected by multiple external forces (e.g., Peterson & Dill, 1997; Duderstadt, 2000). However, most of the research in higher education presents the external environment as a threat to universities being vulnerable to the exogenous forces (Kezar, 2000). On a general level, the findings of this research are consistent with a study of El-Khawas (2000) who explored thirty reform-oriented universities and identified ‘a strong if surprising finding’: the external environment played an important role in helping these institutions to implement the desired changes, thereby providing ‘enabling’ rather than ‘constraining’ influences (El-Khawas, 2000). Moreover, and perhaps more importantly, the current study provided new insights to the body of literature by highlighting the crucial role of exogenous factors - be they external environment or internal forces of change (e.g., student teams) - as a generating mechanism and a resource for transactional change in an academic setting.

Another significant finding relates to the antecedent influence of the organization's internal context on the 'interpretive predispositions' of the academic community regarding the emergent change. Organization studies point out that when managing change, it is essential to take into consideration how change affects the interpretive schemes of an organization's members (e.g., Bartunek, 1984; Gioia & Thomas, 1996). The literature highlights institutional strategies and organizational structures, information-processing structures in particular, as internal contextual features that have an impact on interpretation (Gioia & Thomas, 1996; Daft & Weick, 1984; Thomas, Shankster & Mathieu, 1994). Consistent with this line of thought, the study has paid special attention to the other institutional characteristics, in addition to these internal contextual features, that had a positive antecedent impact on the interpretation and thereby contributed to the perception of the emergent change as an opportunity, not a threat. The first two antecedents - the University's worldview and the University's 'attitude' – served as perceptual lenses through which members of the organization interpreted the change launched by the Lcie initiative. The concept of the (disciplinary) future self created a common frame of reference for collective reflection on how to enhance the education of students in a changing society. Altogether, these antecedent factors acted as conceptual precursors to the transactional change underpinning Lcie. The other internal characteristics - a specialized autonomous unit and organizational professionalism – added to the antecedent influences on how the idea of change relating to the implementation of Lcie was interpreted by the academic community. Thus, Leuven Research & Development (LRD), a highly specialized organizational unit with significant expertise in entrepreneurship, influenced the interpretive predispositions of students towards Lcie as an initiative with a high potential for promoting their entrepreneurial skills. The existence of professional systems in place provided a solid background for introducing the University-wide Lcie-related changes. LRD and organizational professionalism therefore reinforced the positive impact of the conceptual precursors on the interpretive schemes of the academic community, characterizing Lcie as an opportunity rather than a threat. These research findings added new knowledge to the academic literature by broadening the scope of the internal organizational characteristics that have an antecedent influence on the interpretive schemes of academic members and thus shape their perception of emergent change.

Along with the endogenous change-promoting antecedent factors the study has foregrounded several endogenous factors inhibiting transactional change, namely: a large, complex organization; a multi-campus, diffused environment; autonomy of Faculties; and autonomy of

academic staff members. In this framework, several organizational parameters impeding transactional change processes within the University were context-specific, whereas faculty autonomy is common to many, if not most, HEIs. The study indicated that Lcie was challenged by several factors including the complex, multi-layered organization structure, the need to fine-tune the Lcie implementation strategy and tactics to the specifics of each university campus within the KU Leuven Association as well as a strong discretionary power of faculties and departments. In addition, the autonomy of faculty members revealed itself as a particularly challenging factor in implementing university-wide change in this organizational setting. It is worth noting that the issues of engaging academic staff in organizational change efforts have been widely discussed in the literature (e.g., Brown, 2012; Robertson, Robins & Cox, 2009; Trowler, 1998). This study made a further contribution to the academic literature by explicating a range of approaches and mechanisms for motivating faculty and staff to participate in emergent change efforts.

On the whole, the analysis of the empirical data pointed out that the antecedent factors created a powerful foundation for the emergence and the evolution of transactional change within the University. In essence, the antecedent factors exerted a decisive influence on the transactional change dynamics in this academic setting.

Theme 2: Organization structure

The findings of this research illuminated the vital role of the organization structure in promoting transactional change in this academic setting. By looking at how the organizational design induces transactional change across the University, the study brought to focus a matrix-like, network structure, with its strong emphasis on both differentiation and integration. Notably, organization research points out that it is a challenging issue for an organization to ensure the autonomy of units and at the same time to achieve their integration within a complex system (e.g., Dill, 1997a; Bolman & Deal, 2008). The findings of this study provided additional insights into the issues of optimizing differentiation and integration in an HE setting. The study found that the organizational arrangements of this University effectively incorporate differentiation and integration by combining diversity and decentralization with efficient integrative mechanisms that feature various forms of communication and information sharing. The latter are coherent with the essential characteristics of the institutional culture which points up joint decision-making, quality, respect, trust, collegiality, subsidiarity, freedom, innovation, and entrepreneurship. Being

shaped by the University culture, the internal organization fosters transactional change through shared values, network links, and efficient communication within the institution-as-system. Over and above what has been said, this organizational setting allows for the creation of multiple autonomous 'cells' within the institution, encourages them to develop specific expertise and respective capacity for responding to environmental challenges as well as to take advantage of opportunities when they arise. These features of the institutional design foster creativity and entrepreneurship of the organization members, "so that employees can "discover" their jobs rather than be assigned to them…" (Dill, 1997a: 95). In combination with a high level of autonomy, this organization structure enhances the power of competition that energizes transactional change processes within the institution. That being so, the organization structure gives a mighty impetus to the dynamics of transactional change in this University setting.

Overall, the findings have provided evidence for a strong causal link between transactional change processes in universities and organizational arrangements incorporating diversification, autonomy, decentralization, and efficient horizontal coordination mechanisms. From this emphasis, the study offered additional insights into how the above-mentioned characteristics of the organization structure create framework conditions for directing energy, creativity, and resources by granting autonomy to its key entities so that they can develop their areas of strengths; giving freedom of action to individuals and groups, thereby stimulating proactive thinking; encouraging productive interactions throughout the organization and with outside partners; maintaining a balance between top-down and bottom-up decision-making processes.

Theme 3: Policy and procedures

This study found that the University's policies and procedures are determined by the University's primary purpose and the ultimate goals that in turn, embrace a full set of values the University stands for as well as the basic principles underlying the institutional mission and cultural identity. The research findings identified three essential aspects of the institutional policy and the respective vision on education. The first one - a strong emphasis on the appreciation of the organization's strengths – refers to the core principle of the University operations being founded on quality and nurtured by a trust. The second one - the principles of 'inspiration' and 'anchoring' – deals with the engagement of organization members in search of new ideas while leaving time and space for their implementation. The

third one – an explicit focus on engaging the whole institution in a continuous dialogue – relates to the basic principles that shape the University's identity featuring collegiality, subsidiarity, attention to an individual, academic freedom and entrepreneurial commitment. As previously mentioned, these aspects of the institutional policy are in line with the tenets of the appreciative inquiry (AI) practised by the University. The usefulness of the AI approach to affect change in higher education has been widely discussed in the academic literature (e.g., Pittman, 2004; Cockell & McArthur-Blair, 2012). This study expanded the extant literature by highlighting 'inspiration' and 'anchoring' as a functional 'appreciative' strategy and a useful policy framework for catalyzing transactional change in institutions of higher education.

The findings revealed that the policy frameworks and the organization structure of the University are interrelated and tend to reinforce each other. Notably, the academic literature highlights the organization structure-policy-culture alignment among the essential factors for enabling change within an HEI (e.g., Toma, 2010). This doctoral research provided further insight into how the congruence between organization structure and policy frameworks - underpinned by shared cultural values - enhances the entrepreneurial attitude of organizational members and thereby fuels transactional change processes in an academic setting. As previously discussed, the organization structure of the institution is conceived and designed in such a way as to stimulate individual initiatives, foster entrepreneurial attitude and energize internal and external competition by creating "networks of cooperating and competing actors" (Hargrave & Van de Ven, 2006: 873). As such, the organization structure establishes much diversity within the institution and at the same time, fosters dialogue, collaborative activities and joint decision-making processes through the efficient horizontal coordination mechanisms and professional supporting services. Therefore, while reflecting the core values and standards of behaviour underpinning the institutional mission and cultural identity, the organization structure embodies the principles of openness, trust, and bottom-up possibilities, thereby creating the institutional conditions for cross-fertilization between organizational structure and policy frameworks.

In summary, the research findings suggest that the policy frameworks inform and are informed by the organizational structure. Essentially, the University has developed the institutional policy and the structure of 'trust,' 'individual freedom' and 'responsibility' that enable individual initiative, ensure autonomy and academic freedom and promote differentiation within the institution-as-system. Overall, the alignment of policy frameworks

with organization structure while being rooted in the institutional cultural identity has proved to be a significant lever for transactional change processes in this organizational setting.

Theme 4: Management practices

Findings associated with this research question were particularly revealing in regard to understanding the transactional change phenomenon in universities as organizations. Evidence from interviews and document analysis suggest that management practices for the University's transactional change prominently foregrounded a combination of planned and emergent approaches, use of multidimensional change agency models, and participative and pervasive implementation tactics. By delving deeper into the specifics of aforementioned focus areas, the study unveiled important aspects of managerial work that confirmed findings from the change literature. Additionally, it provided new insights into managerial strategy and approaches to fostering transactional change within an HEI.

Furthermore, the study reinforced previous research findings that planned and emergent change are not mutually exclusive and can complement each other (e.g., Burnes, 2004a; Van der Voet, Kuipers & Groeneveld, 2016). Moreover, this doctoral research identified the interactive effect of planned and emergent change on transactional dynamics as a lever for evolutionary change within the University. It is noteworthy that there is a substantial body of literature on managing planned and emergent change in organizations (e.g., Bamford & Forrester, 2003; Sminia & Van Nistelrooij, 2006). However, the means to advance the interactive effect of a planned and emergent change through a multidimensional change agency model, particularly in HEIs, is under-researched. Thus, this study significantly added to the literature by demonstrating how various change agents' mutually reinforcing impact amplifies the interactive effect of planned and emergent change and thereby fosters the evolution of emergent change in universities as organizations.

By reflecting on the change agency's role in implementing Lcie within the University, the study highlighted four change agents, i.e., the autonomous strategic unit, team, leadership, and management. Together, these change agents provided mutual, reinforcing impact on the transactional change dynamics in this organization setting.

- *The autonomous strategic unit* - Leuven Research & Development (LRD) - facilitated change by helping to overcome boundaries between faculties and departments, thereby decisively contributing to the creation of the Lcie community. Furthermore, with its

remarkable business activities, entrepreneurial expertise as well as vast experience in working with faculty members and central and supporting staff, LRD significantly influenced the collective dynamics underpinning Lcie implementation.

- *The team* featured prominently by student' associations, created a 'team of teams' that shaped and fostered Lcie as a transactional change initiative. Acting as self-managed teams, student' associations influenced the evolution of emergent change in two major respects: (1) as an exogenous determinant of transactional change dynamics considering that Lcie was initially conceptualized at central and Faculty levels; and (2) as a driving force behind the development of a dynamic network of organization-wide change teams actuated entirely by personal engagement. Caldwell (2003) noted the limited empirical research on change agency as a team process, although this idea has received much attention in the last decade. This study's findings suggest that universities, as loosely coupled systems, would particularly benefit from further exploration into this field in which students as change teams should become one of the focal areas for reflection.
- *Leadership* ensured space for change and created conditions for making transactional change happen. From the study of *leadership* as a change agent in this organization setting, the current research gained valuable insights into strategies and approaches that could significantly foster change in institutions of higher education. Particularly, two important areas came to the fore as principles for action to enhance transactional change dynamics in universities as organizations: creating a 'protective' environment for change and involving the university community in 'stealth' innovation. The former allows the emergent change to evolve by ensuring the necessary framework conditions for individuals and groups to engage in a 'disruptive' change - that is, by giving freedom to organization members to experiment and improvise outside the existing structures and then share their experience and seek support from the mainstream organization. The latter gives opportunities to a coalition of willing people to launch change and then, by disseminating results of a pilot project, convince organization members to join the change initiative. Overall, the study featured the crucial role of leadership in activating social energy within the institution-as-system central to the development of organizational capacity – a distinctive characteristic of the University.
- *Management* amplified the advances of the change-enabling environment set up by the university leadership. Thus, by acting as a composer and a conductor of change processes (Ducker, 1954), the Lcie coordinator played a key role in inspiring, motivating and empowering institutional members and self-directed teams to shape and develop the

change initiative, thereby providing a crucial impact on the transactional change dynamics within the University.

At the most general level, the findings discussed above are consistent with the proposition of Caldwell (2003) that it is important to treat "change agency as a complex and potentially integral process that needs to be effectively managed within organizations" (Caldwell, 2003: 132). At the same time, this doctoral study provided new insights into how the multidimensional change agency model can be implemented and efficiently managed works in institutions of higher education.

Regarding the implementation tactics, the Lcie management style deviated significantly from the traditional model of managerial work focused on planning, organizing, controlling, and assessing performance (Caldwell, 2003). The research has shown that the managerial tactics and technics underpinning the implementation of Lcie put an emphasis on developing a vision, using bootstrapping methods of implementation, creating synergies, bringing together managerial and faculty values, introducing change without forcing things, building on information and transparency, accomplishing and celebrating small wins. It follows from the above, therefore, that the managerial work by implementing Lcie focused on devolving power and empowering individuals and teams to engage in change processes, rather than on organization and control. In essence, these managerial approaches featured, in Nutt's (1986) terms, 'participation' and 'persuasion' tactics and, according to Caldwell (2003) "a new 'involvement' and 'commitment' style" (Caldwell, 2003: 135) – apparently, both require the efficient organizational, interpersonal and process management skills. Overall, the research findings suggest that the above-mentioned management style and tactics are essential for instigating and mastering transactional change in flatter organizational structures, particularly in universities as organizations.

By way of summary, it is important to emphasize the point that the management practices of the University merit consideration of policymakers and practitioners who aim to foster change in loosely coupled organizations. Notably, Burke (2011) contends that we still do not have enough knowledge about how to work with loosely coupled systems. Several principles of change by working with loosely coupled systems, e.g., large group interventions were highlighted in the literature review chapter. By looking closely at the management practices to

foster transactional change within the University, the findings of the current study deepened scholarly knowledge on how to affect change in loose coupling organization structures.

Theme 5: Work climate

By exploring the connections between work climate at the University and the institutional arrangements, the study revealed a strong impact of structure, policy frameworks and management practices on the individual, group and organizational processes. At the core of these processes lies the bottom-up, entrepreneurial culture that fosters a climate of openness, a climate of innovation and consequently, a change-conducive climate. Thus, *the organization and governance structure* – with its highly differentiated autonomous entities within the integrated institution and a strong emphasis on bottom-up, decision-making processes – allows people to take the initiative, test new ideas and develop innovative practices, thereby encouraging organizational members to be creative and entrepreneurial. *Policy frameworks* influence the individual, group and organizational processes through the focus on the collective vision, a shared sense of purpose as well as inspiration and anchoring, thereby spurring entrepreneurial attitudes and behaviour. *Management practices* reinforce the impact of structure and policy on attitudes and behaviours of organizational members through a wide range of mechanisms that inspire entrepreneurship and creativity of the academic community. Furthermore, the academic freedom and bottom-up activities are supported by a professional service organization that, among others, enhances the development of skills and competencies leading to high performance and change capacity of individuals, groups and the organization as a whole. Overall, the organizational conditions foster many and various motivations for creativity and entrepreneurship that in turn, engender organization change. While being generally consistent with the Burke-Litwin model, this study expanded organization change literature by explicating the synergetic effect of structure, policy, management practices and climate on the dynamics of person-driven, group-driven and organization-driven transactional change in an academic setting.

In summary, the findings pointed to the fact that organizational structure, policy frameworks, and management practices - while being rooted in the University's culture - exert a strong influence on work climate. In effect, the values underpinning the institutional culture – like bottom-up joint decision-making, drive for quality, trust, freedom, entrepreneurship, and creativity – are operationalized through the above-mentioned transactional dimensions. The synergy between the organizational arrangements and cultural values create respective

climates at the individual, group and organizational levels that allow to address the challenge of change from different angles and ultimately make transactional change occur in this organizational setting.

6.3 Contribution to the academic literature

The findings identified several issues tailored to promoting further development of organizational change theory including institutions of higher education. By using the Burke-Litwin Model of Organizational Performance and Change as a heuristic tool for capturing organizational dimensions that are central to transactional change processes, the study brought into light the significance of organization structure, policy frameworks, management practices and climate for creating the organizational environment that allows emergent change to evolve. Working from the modified approach to the Model - which was traditionally used to diagnose and guide planned change in organizations – the study advanced theory in the fields of change management and organizational change in higher education in several significant respects.

First, the study took an important step toward developing a systemic approach to the deconstruction of the transactional change phenomenon in universities as organizations. While the literature has paid most attention to the transformational change in HEIs (e.g., Cameron & Ulrich, 1986; Duderstadt, 2000), the study of transactional change is relatively new in a HE context. By focusing on interconnections and interactions between the enabling environment, both external and internal, as well as on drivers for change at the individual, group and organizational levels, the study underscored the importance of systemic factors in fostering transactional change across an institution of higher education.

Second, the findings gave new insights into *how* organizational structure, policy frameworks, management practices and climate foster change in organizations including HEIs, both individually and through their synergy. Thus, there is an extensive research on the role of organization structure, policy and procedures, management practices and climate in facilitating organizational change (e.g., Clark, 1984; Burnes, 2014; Burke, 2014); however, it remains understudied *how* these organizational arrangements shape transactional change processes, particularly through their synergetic effect. By focusing a discussion on a level of practice, the study elucidated *how* organizational change is influenced and dynamized by these transactional dimensions in institutions of higher education.

Third, this research essentially contributed to organization change literature regarding the role of multidimensional change agency in fostering transactional change in universities through the interactive effect of planned and emergent change. While literature highlights the importance of multiple change agents in facilitating change in organizations (e.g., Caldwell, 2003; Van Poeck, Læssøe & Block, 2017), the role of various change agents in promoting the interaction between planned and emergent change, particularly in a HE setting, has received less research attention. By placing emphasis on the mutually reinforcing impact of various change agents on forging links between planned and emergent change and thereby on transactional change dynamics, the findings of this research deepened the scholarly knowledge on how to foster the evolution of emergent change in universities as organizations.

Fourth, the study deepened scholarly knowledge on how transactional change emerges and evolves in universities as loosely-coupled systems. While there is a rich body of literature studying organization change from the leadership perspective (e.g., Higgs & Rowland, 2005; Scott, 2011), the loosely-coupled aspects of HEIs have not been sufficiently addressed (Kezar, 2001). By featuring the multiple viewpoints of senior leaders, administrators, faculty members, students, and external stakeholders, the findings of this research provided a rich explanation of how the loosely-coupled nature of universities affects transactional change processes within an HEI.

Fifth, the study made an original contribution to the organizational change literature with the development of a new model of transactional change in higher education. As the literature review suggests, there has been a need for a new model of change that will help better understand and guide change processes in universities as organizations (Torraco, 2005; Summerville, 2005). This study featured prominently the role of antecedent influences on the transactional change phenomenon and in this framework exposed exogenous factors as a crucial lever for change in an HE setting. The research findings led to suggest the 5-dimension model of transactional change in higher education institutions based on the premise that the mutually complementary effect of the antecedent factors, organizational structure, policy frameworks and work climate is a significant determinant of transactional change in an HE setting. By having developed an analytical tool for strategizing, instigating and managing transactional change in academic settings, the study substantially advanced organizational change theory and practice in higher education.

Overall, the research findings highlighted the Burke-Litwin model as a useful framework for addressing development and change in universities, thereby being in line with the organization change researchers who applied the Model in an HE context (e.g., Smith & Martinez, 2015). At the same time, the study expanded and deepened the extant research applying the Model to higher education by highlighting a reinforcing effect of the antecedent factors and transactional dimensions as a vital factor in fostering transactional change in universities as organizations.

6.4 Implications for practice

Based on the key findings emerging from this research, seven main recommendations were determined.

Utilizing the power of exogenous factors to instigate transactional change. The research findings suggest that exogenous factors exert a significant impact on the processes of transactional change in institutions of higher education. Given this implication, it is essential to build upon the power of exogenous factors while strategizing for transactional change in an HE setting.

Creating an organizational structure with a high level of differentiation and integration. The research results evidence that differentiation and integration in organizational structuring significantly dynamize the processes of transactional change within an-institution-as-system. Thus, it is essential to endow specialized units with enough autonomy and, at the same time, design mechanisms and processes that enable their integration within the university system. Within this framework, installing efficient horizontal coordination mechanisms across faculties, departments, student organizations, and professional support services is paramount. Furthermore, it is crucial to ensure linkage between bottom-up activities and institutional leadership in framing organization-wide processes. Overall, a 'strategic blend', in Ruben's (2005) terms, of differentiation, integration, centralization, and decentralization, is a potent driver of transactional change processes within an HEI.

Encouraging 'inspiration' and 'anchoring'. Universities should recognize the importance of 'inspiration' and 'anchoring' in fostering organization-wide transactional change processes. The implementation of these principles relies heavily on academic freedom as well as on the engagement of students and faculty and staff members in collaborative processes and the search for new ideas. The creation of conditions that 'anchor' the emergent change within an

institution is equally important. The basic premise for initiating organization-wide transactional changes is that inspiration requires mission- and vision-based cultivation of ideas within a university-as-system. Encouraging inspiration also means nurturing the entrepreneurial mindset among students and members of the faculty and staff.

Engaging organizational members in 'stealth' innovation. Transactional change in universities can be promoted by involving faculty and staff in 'stealth' innovation. Thus, launching a pilot project with a coalition of willing people and subsequently diffusing the pilot results across the organization as a whole can help convince the academic community of the relevance of the change effort and thereby promote organization-wide transactional change processes.

Creating a 'protective' environment for change. In order to foster transactional change processes across an institution, universities could consider strategies to ensure a 'protective' environment for change. This approach has proved useful in providing opportunities for emerging change to evolve and creating conditions for disruptive change that can be launched outside of existing structures.

Using multi-dimensional change agency models. Universities could energize transactional change dynamics in organizations-as-systems by activating various change agents, such as organizational leadership, management, strategic academic units and change teams comprising students. Engaging various change agents and managing their involvement in a change process can help induce and foster transactional change in institutions of higher education.

Enhancing professionalism in universities as organizations. Universities should make a concentrated effort to enhance organizational professionalism. As evidenced in this study, organizational professionalism applies to various aspects of institutional policy and operations, including organizational function design system, organization-wide professional services such as management services and education services, among others; and capacity development programs for the leadership, faculty and staff members. Overall, professional services provide the fundamentals for supporting academic freedom as a precondition for organizational development and change in an HE setting. The issue is to ensure that professional services are well performed and well managed.

The limitations of this study are outlined in the next section.

6.5 Limitations

As a qualitative, interpretive, single-case study, this dissertation has limitations, which are summarized below.

The primary limitation relates to issues associated with empirical generalization. Since this case study concentrates on a single unit of analysis, the scope for deriving broader inferences is limited. The generalizability of this study is further limited by its focus on transactional change dynamics in a comprehensive, research-intensive university where institution-wide transactional change is a well-established practice. Accordingly, by excluding from consideration the various types of higher education institutions, this study narrows the range of perspectives on the nature of the phenomenon of transactional change in an academic setting. Given these limitations, the researcher followed Lewis *et al*. (2014), who suggested viewing generalization as involving three distinct types of inferences: (a) *representational generalization* or, in Maxwell's (1992) terms, "internal" generalizability, which refers to whether the findings in a research sample can be generalized for the parent population from which the sample is drawn; (b) *inferential generalization*, which refers to whether the findings of a particular study can be used to draw inferences for other settings or contexts; and (c) *theoretical or 'analytic' generalization*, which refers to whether theoretical propositions or principles for wider application can be derived from the findings of a study (Lewis *et al.*, 2014). With this context in mind, the researcher attempted to minimize the limitations of this study by selecting a diverse representative sample of research participants who were central to the understanding of the phenomenon of transactional change in the organization while remaining cognizant of the fact that generalization from the qualitative data can only occur in relation to the participants in this study. Furthermore, the researcher was aware of the need to avoid direct inferential generalization from this research in other academic settings and types of higher education institutions. Overall, the researcher strove to produce meaningful qualitative evidence that could have the potential for a wider application (Ormston *et al.*, 2014). The researcher therefore aimed at analytic generalization, trying to identify generalizable findings or lessons that transcend the scope of the case under investigation (Yin, 2014).

Another limitation concerns the potential bias that could arise from the researcher's previous experience within the context of this study. As discussed above, the researcher addressed this limitation by incorporating reflexivity in this doctoral study (see chapter 4). By practising

critically reflexive questioning of the researcher's basic assumptions, by working with alternative interpretations of the same phenomenon as well as by directly involving participants in a reflexive process, the researcher strived to minimize the impact of possible influences of preexisting beliefs and perceptions on the research process including the collection, interpretation and presentation of the qualitative data (Ormston *et al.*, 2014).

The next section offers suggestions for future research, taking into consideration the limitations of the study that are presented above.

6.6 Suggestions for future research

Following are the proposed directions for future research that arose out of the thesis.

Firstly, this study conducted a single-case investigation purposefully focused on the transactional change dynamics in a research-intensive, entrepreneurial university where large-scale transactional change is a well-established practice. The results of this study would have been more triangulated if the origins of transactional change in higher education had been examined in multiple case studies providing diverse perspectives on the transactional change phenomenon; this would have added to the credibility of the research conclusions (Patton, 2002). The exploration of transactional change in various types of higher education institutions could reveal different facets of the phenomenon and thereby deepen understandings of how transactional change occurs in academic settings. Comparative studies could provide additional insights into transactional change in higher education, particularly studies looking for consistent patterns in how organizational structure, policy frameworks, management practices and climate foster and sustain transactional change processes within an HEI.

Secondly, the study considered the major role of the organization's structure, policy frameworks, management practices and climate in fostering transactional change dynamics in institutions of higher education. In this framework, the study highlighted the intrinsic relationship between transactional change dynamics and the entrepreneurial character of the university. It would be relevant to conduct further research into the essential characteristics of entrepreneurial universities that enable these institutions to launch and sustain large-scale change continuously.

Thirdly, the principal topics addressed in this study should be further developed, particularly those related to the following important areas for future research:

- the dynamics of interaction between planned and emergent change in a higher education setting;
- differentiation and integration in organizational structures as enabling factors for development and change in an HE setting; in this context; it would be relevant to explore the role of differentiation and integration in fostering interdisciplinarity, given the pertinence of the issue for modern HEIs;
- efficient strategies and mechanisms for creating a 'protective' environment for change within a university;
- multidimensional change agency models with a particular focus on students as change teams;
- strategies and tools employed by academic leaders to develop change capacity in universities as organizations;
- approaches to enhance linkages between bottom-up activities and leadership processes;
- strategies and mechanisms to foster organizational professionalism in a university setting;
- management practices in universities as loosely-coupled systems.

Finally, future research on transactional change in universities could benefit from combining qualitative and quantitative research approaches. Using both methods could essentially foster knowledge development and enhance an understanding of the phenomenon under investigation (Bui & Baruch, 2010). Since each method generates a distinct body of evidence, when used together, they can provide a potent means to inform and illuminate practice or policy (Ritchie & Ormston, 2014). Given the complexity of transactional change processes in an HE setting, exploration of the issue through a combined lens of qualitative and quantitative methodologies could allow researchers and practitioners to delve deeper into the multi-faceted nature of transactional change in institutions of higher education.

6.7 Concluding remarks

This study has provided an explanatory analysis of how transactional change occurs in universities as organizations. In this framework, the study focused on the role of the transactional dimensions of the Burke-Litwin model - organization structure, policy frameworks, management practices, and climate - in creating a change-conducive

environment within an HEI. In addition, the study paid particular attention to the influence of exogenous and endogenous antecedent factors on the transactional change dynamics in an HE setting. The research insights highlighted a strong cumulative effect of antecedent factors, organization structure, policy frameworks, management practices and work climate on inducing, enabling, and fostering transactional change in the academic setting. The study suggests that these antecedent factors and transactional dimensions require the attention of policy-makers and practitioners who are aiming to introduce or energize transactional change processes within an HEI.

BIBLIOGRAPHY

Ackerman, L.S. (1996) Development, transition or transformation: Bringing change leadership into the 21st century. *OD Practitioner*, 28(4): 5-16.

Ahern, K.J. (1999) Pearls, pith, and provocation: Ten tips for reflexive bracketing. *Qualitative Health Research*, 9(3): 407-411.

Akerman, C. (2014*) Benchmarking: The Engineering Faculties at Lund University and KU Leuven*. University of Lund: Faculty of Engineering Report. Available at: http://www.lth.se/fileadmin/_migrated/content_uploads/Bilaga_2_Benchmarking_-_technical_faculties_-_Lund_University_and_KU_Leuven_-_final_version.pdf (Accessed 18 June 2017).

Alas, R., and Sharifi, S. (2002) Organizational learning and resistance to change in Estonian companies. *Human Resource Development International*, 5(3): 313-331.

Alvesson, M. (2003) Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of Management Review*, 28(1): 13-33.

Alvesson, M., Hardy, C., and Harley, B. (2008) Reflecting on reflexivity: Reflexive textual practices in organization and management theory. *Journal of Management Studies*, 45(3): 480-501.

Anderson, G. (2008) Mapping academic resistance in the managerial university. *Organization*, 15(2): 251-270.

Anderson, D., and Ackerman Anderson, L. (2001) *Beyond Change Management: Advanced Strategies for Today's Transformational Leaders*. San Francisco: Jossey-Bass/Pfeiffer.

Anrade, A.D. (2009) Interpretative research aiming at theory building: Adopting and adapting the case study design. *The Qualitative Report*, 14(1): 42-60.

Argyris, C., and Schön, D.A. (1978) *Organizational Learning: A Theory of Action Perspective*. Reading, MA: Addison-Wesley.

Armenakis, A.A., and Bedeian, A.G. (1999) Organizational change: A review of theory and research in the 1990s. *Journal of Management*, 25(3):293-315.

Attia, M., and Edge, J. (2017) Be(co)ming a reflexive researcher: A developmental approach to research methodology. *Open Review of Educational Research*, 4(1): 33-45.

Auerbach, C.F., and Silverstein, L.B. (2003) *Qualitative Data: An Introduction to Coding and Analysis*. New York: New York University Press.

Austin, J.L. (1962) *How to Do Things with Words*. Cambridge, MA: Harvard University Press.

Bacon, E. (2014) *Neo-Collegiality: Restoring Academic Engagement in the Managerial University*. Stimulus paper. London: Leadership Foundation for Higher Education. Available at: https://core.ac.uk/download/pdf/141222061.pdf (Accessed May 16 2019).

Baker, D.P. (2014) *The Schooled Society: The Educational Transformation of Global Culture*. Stanford, CA: Stanford University Press.

Balogun, J., and Hope Hailey, V. (2004) *Exploring Strategic Change*. 2nd ed. London: Prentice Hall.

Bamford, D.R., and Forrester, P.L. (2003) Managing planned and emergent change within an operations management environment. *International Journal of Operations & Production Management*, 23(5): 546-564.

Bantz, C.R. (1993) *Understanding Organizations: Interpreting Organizational Communication Cultures*. Columbia, SC: The University of South Carolina Press.

Barnett, W.P., and Carroll, G.R. (1995) Modeling internal organizational change. *Annual Review of Sociology*, 21: 217-236.

Barrett, F.J., Thomas, G.F., and Hocevar, S.P. (1995) The central role of discourse in large-scale change: A social construction perspective. *Journal of Applied Behavioral Science*, 31(3). 352-372.

Bartell, M. (2003) Internationalization of universities: A university culture-based framework. *Higher Education*, 45(1): 43-70.

Bartunek, J.M. (1984) Changing interpretive schemes and organizational restructuring: The example of a religious order. *Administrative Science Quarterly*, 29: 355-372.

Bartunek, J.M., and Moch, M.K. (1987) First-Order, Second-Order, and Third-Order Change and Organization Development Interventions: A cognitive approach. *Journal of Applied Behavioral Science*, 23(4): 483-500.

Bastedo, M.N. (2012) Organizing higher education: A manifesto. In: Bastedo, M.N. (ed) *The Organization of Higher Education: Managing Colleges for a New Era*, pp. 3-17. Baltimore: The John Hopkins University Press.

Becher, T. (1981) Towards a definition of disciplinary cultures. *Studies in Higher Education*, 6(2): 109-122.

Becher, T. (1994) The significance of disciplinary differences. *Studies in Higher Education*, 19(2): 151-161.

Becher, T., and Trowler, P. R. (2001) *Academic Tribes and Territories: Intellectual Enquiry and the Cultures of Disciplines*. 2nd ed. Buckingham: Open University Press/SRHE.

Beckhard, R. (1969) *Organization Development: Strategies and Models*. Reading, MA: Addison-Wesley.

Beer, M., and Nohria, N. (2000) Resolving the tension between theories E and O of change. In: Beer, M., and Nohria, N. (eds) *Breaking the Code of Change*, pp. 1-34. Boston, MA: Harvard Business School Press.

Bell, L. (2002) Strategic planning and school management: Full of sound and fury, signifying nothing? *Journal of Educational Administration*, 40(5): 407-424.

Bell, E., and Bryman, A (2007) The ethics of management research: An exploratory content analysis. *British Journal of Management*, 18(1): 65-77.

Bellefroid, F., and Elen, J. (2003) *Fostering Quality at the Katholieke Universiteit Leuven*. Available at: https://www.oecd.org/belgium/1871276.pdf (Accessed 26 May 2017).

Benbasat, I., Goldstein, D.K., and Mead, M. (1987) The case research strategy in studies of information systems. *Management of Information Systems Quarterly*, 11(3): 369-388.

Bennis, W. G. (1993) *An Invented Life: Reflections on Leadership and Change*. Reading, MA: Addison-Wesley Publishing Company.

Bergquist, W.H. (1992) *The Four Cultures of the Academy*. San Francisco: Jossey-Bass.

Berling, C. (2000) Continuous improvement as seen from groups and improvement agents. *Total Quality Management*, 11(4-6): 484-489.

Berry, J.M. (2002) Validity and reliability issues in elite interviewing. *PS: Political Science and Politics*, 35(4): 679-672.

Birnbaum, R. (1988) *How Colleges Work: The Cybernetics of Academic Organization and Leadership*. San Francisco: Jossey-Bass.

Blake, I. (2016) *Evolution and themes in change management. 'Change management 2.0'*. Available at: https://www.change-management-institute.com/sites/default/files/CMI%20White%20Paper_Evolution%20and%20Themes%20in%20Change%20Management_Ira%20Blake.pdf (Accessed 20 March 2017).

Bleiklie, I. (2018) New public management or neoliberalism, higher education. In: Shin, J.C., and Teixeira, P.N. (eds) *Encyclopedia of International Higher Education Systems and Institutions*, pp. 1-6. Dordrecht: Springer. Available at:

https://www.researchgate.net/publication/323872555_New_Public_Management_or_Neoliberalism_Higher_Education (Accessed 28 May 2019).

Bleiklie, I., Enders, J., and Lepori, B. (2017) Setting the stage – theory and research questions. In: University governance – Organizational centralization and engagement in European universities. In: Bleiklie, I., Enders, J., and Lepori, B. (eds) *Managing Universities: Policy and Organizational Change from a Western European Comparative Perspective*, pp. 3-28. London: Palgrave.

Bleiklie, I., Michelsen, S., Krücken, G., and Frølich, G. (2017) University governance – Organizational centralization and engagement in European universities. In: Bleiklie, I., Enders, J., and Lepori, B. (eds) *Managing Universities: Policy and Organizational Change from a Western European Comparative Perspective*, pp. 139-165. London: Palgrave.

Blumberg, B., Cooper, D.R., and Schindler, P.S. (2011) *Business Research Methods*. 3rd ed. Berkshire: McGraw-Hill Education.

Bolman, L., and Deal, T. (2008) *Reframing Organizations: Artistry, Choice, and Leadership*. 4th ed. San Francisco: Jossey-Bass.

Bouckenooghe, D. (2010) Change recipients' attitudes toward change: A review study. *The Journal of Applied Behavioral Science*, 46(4): 500-531.

Boulton, G., and Lucas, C. (2008) *What are Universities For*? Available at: https://globalhighered.files.wordpress.com/2009/09/paper_2008-07_1_final_version.pdf (Accessed 16 May 2017).

Boyatzis, R.E. (1998) *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks/London/New Delhi: Sage Publications.

Bradford, D.L., and Burke, W.W. (2005) The crisis in OD. In: Bradford, D.L., and Burke, W.W. (eds) *Reinventing Organization Development: New Approaches to Change in Organizations*, pp. 7-14. San Francisco: Pfeiffer.

Braun, V., and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2): 77-101.

Brinkmann, S. (2018) The interview. In: Denzin, N.K., and Lincoln, Y.S. (eds) *The SAGE Handbook of Qualitative Research*. 5th ed., pp. 576-599. Thousand Oaks, CA: Sage Publications.

Brinkmann, S., and Kvale, S. (2015) *InterViews: Learning the Craft of Qualitative Research Interviewing*. 3rd ed. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage.

British Educational Research Association (BERA) (2011) *Ethical Guidelines for Educational Research.* Available at: https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf?noredirect=1 (Accessed 18 February 2016).

Broucker, B., and De Wit, K. (2013) Liberalization and privatization of higher education in Flanders: Passing the point of no return? A case study. *European Educational Research Journal*, 12(4): 513-523.

Brown, S. (2012) Managing change in universities: A Sisyphean task? *Quality in Higher Education*, 18(1): 139-146.

Brown, S. L., and Eisenhardt, K.M. (1997) The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly*, 42(1): 1-34.

Bryman, A. (1989) *Research Methods and Organization Studies*. New York: Routledge.

Bryman, A. (2007) Effective leadership in higher education: A literature review. *Studies in Higher Education*, 32(6): 693-710.

Bryman, A. (2012) *Social Research Methods*. 4th ed. New York: Oxford University Press.

Bryson, C. and Barnes, N. (2000) The casualization of employment in higher education in the United Kingdom. In: Tight, M. (ed) *Academic Work and Life: What is to be an Academic, and how this is Changing*, pp. 187-241. Oxford: Elsevier Science.

Buchanan, D.A., and Boddy, D. (1992) *The Expertise of the Change Agent*. London: Prentice Hall.

Buchanan, D.A., and Bryman, A. (2007) Contextualizing methods of choice in organizational research. *Organizational Research Methods*, 10(3): 483-501.

Buchanan, D.A., and Huczynski, A. (2004) *Organizational Behavior: An Introductory Text (Instructor's Manual)*. 5th ed. Harlow, UK: Financial Times Prentice Hall.

Buchanan, D., Fitzgerald, L., Ketley, D., Gollop, R., Jones, J.L., Lamont, S.S., Neath, A., and Whitby, E (2005) No going back: A review of the literature on sustaining organizational change. *International Journal of Management Reviews*, 7(3): 189-205.

Bui, Hong T.M., and Baruch, Y. (2010) Creating learning organizations: A systems perspective. *The Learning Organization*, 17(3): 208-227.

Bui, Hong T.M., Baruch, J., Chau, Vinh S., and He, Hong-Wei. (2016) Team learning: The missing construct from a cross-cultural examination of higher education. *Asia Pacific Journal of Management*, 33(1): 29-51.

Bullock, R., and Batten, D. (1985) It's just a phase we're going through: A review and synthesis of OD phase analysis. *Group & Organization Studies*, 10(12): 383-412.

Bunker, B.B., Alban, B.T., and Lewicki, R.J. (2004) Ideas in currency and OD practice: Has the well gone dry. *The Journal of Applied Behavioral Science*, 40(4): 403-422.

Buono, A.F., and Kerber, K.W. (2010) Creating a sustainable approach to change: Building organizational change capacity. *SAM Advanced Management Journal*, 75(2): 4-14.

Burke, W.W. and Litwin, G.H. (1992) A causal model of organizational performance and change. *Journal of Management*: 18(3), 523-545.

Burke, W.W. (1995) Organization change: What we know, what we need to know. *Journal of Management Inquiry*, 4(2): 158-171.

Burke, W.W. (2011) A perspective on the field of organization development and change: The Zeigarnik effect. *The Journal of Applied Behavioral Science*, 47(2): 143-167.

Burke, W.W. (2014) *Organizational Change: Theory and Practic*e. 4th ed. Thousand Oaks, CA: Sage Publications.

Burnes, B. (1996) No such thing as… a "one best way" to manage organizational change. *Management Decision*, 34(10): 11-18.

Burnes, B. (2004a) Emergent change and planned change – competitors or allies? The case of XYZ construction. *International Journal of Operations & Production Management*, 24(9): 886-902.

Burnes, B. (2004b) Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies*, 41(6): 977-1002.

Burnes, B. (2009) *Managing Change: A Strategic Approach to Organizational Dynamics*. 5th ed. Harlow, UK: Pearson Education Ltd.

Burr, V. (1995) *An Introduction to Social Constructionism*. London: Routledge.

Bushe, G.R. (1995) Advances in appreciative inquiry as an organization development intervention. *Organization Development Journal*, 13(3): 14-22.

Bushe, G.R. (2011) Appreciative Inquiry: Theory and critique. In: Boje, D., Burnes, B., and Hassard, J. (eds) *The Routledge Companion to Organizational Change*, pp. 87-103. Oxford, UK: Routledge.

By, R.T. (2005) Organizational change management: A critical review. *Journal of Change Management*: 5(4), 369-380.

Caldwell, R. (2001) Champions, adapters, consultants and synergists: The new change agents in HRM. *Human Resource Management Journal*, 11(3): 39-52.

Caldwell, R. (2003) Models of change agency: A fourfold classification. *British Journal of Management*, 14(2): 131-142.

Caldwell, S.D., Herold, D.M., and Fedor, D.B. (2004) Toward an understanding of the relationships among organizational change, individual differences, and changes in person-environment fit: A cross-level study. *Journal of Applied Psychology*, 89: 868-882.

Cameron, K.S., and Ulrich, D.O. (1986) Transformational leadership in colleges and universities. In: Smart, J.C. (ed) *Higher Education: Handbook of Theory and Research*, vol. 2, pp. 1-42. New York: Agathon Press.

Cameron, K.S., and Whetten, D.A. (1983) *Organizational Effectiveness: A Composition of Multiple Models*. New York: Academic Press.

Capelli, P., and Sherer, P.D. (1991) The missing role of context in OB: The need for a meso-level approach. *Research in Organizational Behavior*, 13: 55-110.

Carneiro, R. (2010) Transforming universities. In: Ehlers, U-D., and Schneckenberg, D. (eds) *Changing Cultures in Higher Education: Moving Ahead to Future Learning*, pp. 55-67. Heidelberg/London/New York: Springer.

Cawsey, T., and Deszca, G. (2007) *Toolkit for Organizational Change*. Thousand Oaks, CA: Sage Publications.

Chaffee, E.E., and Jacobson, S.W. (1997) Creating and changing institutional cultures. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 230-245. San Francisco: Jossey-Bass.

Chawane, T., Vuuren, L.V., and Roodt, G. (2003) Personal change as a key determinant of the outcomes of organizational transformation interventions. *SA Journal of Human Resource Management*, 1(3): 62-76.

Christensen, L.B., Johnson, R.B., and Turner, L.A. (2011) *Research Methods, Design, and Analysis*. 11th ed. Boston, MA: Pearson Education.

Clark, B.R. (1997) Foreword. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. xiii-xviii. San Francisco: Jossey-Bass.

Clark, B.R. (1998) *Creating Entrepreneurial Universities: Organizational Pathways of Transformation*. United Kingdom/North America/Japan/India/Malaysia/China/Australasia: Emerald Group Publishing Ltd.

Clark, A. (2006) Anonymising Research Data. *ESRC National Centre for Research Methods*. NCRM Working Paper Series, 7(6): 1-21. Available at: http://eprints.ncrm.ac.uk/480/1/0706_anonymising_research_data.pdf (Accessed 2 August 2019).

Clegg, S. (2008) Academic identities under threat? *British Educational Research Journal*, 34(3): 329-345.

Cleveland-Innes, M. (2010) New directions for higher education: Challenges, opportunities, and outcomes. In: Ehlers, U-D., and Schneckenberg, D. (eds) *Changing Cultures in Higher Education: Moving Ahead to Future Learning*, pp. 133-147. Heidelberg/London/New York: Springer.

Coch, L., and French, J.P.R. (1948) Overcoming resistance to change. *Human Relations*, 1: 512-532.

Cockell, J., and McArthur-Blair, J. (2012) *Appreciative Inquiry in Higher Education: A Transformative Force*. San Francisco: Jossey-Bass.

Codd, J. (1988) The construction and deconstruction of education policy documents. *Journal of Education Policy*, 3(3): 235-248.

Coghlan, D., and McAuliffe, E. (2003) *Changing Healthcare Organizations*. Dublin: Blackhall Publishing.

Cohen, M.D., March, J.G., and Olsen, J.P (1972) A garbage can model of organizational choice. *Administrative Science Quarterly*, 17(1): 1-25.

Cohen, A.R., Fetters, M., and Fleischmann, F. (2005) Major change at Babson College: Curricular and administrative, planned and otherwise. *Advances in Developing Human Resources*, 7(3): 324-337.

Cole, R.M., and Heinecke, W.F. (2018) *Policy Futures in Education*, 0(0): 1-27.

Cooper, R. (2015) *The Shared Services Organizational Model in Higher Education Enrollment Management: The Application of the Transactional Components of the Burke-Litwin Model of Organizational Performance and Change and the Moderating Effect of Employee Engagement on Individual Motivation*. Doctoral dissertation, The University of Texas at Tyler. Available at: https://scholarworks.uttyler.edu/hrd_grad/9/ (Accessed 22 September 2017).

Cooperrider, D.L., and Srivastva, S. (1987) Appreciative inquiry in organizational life. In: Woodman, R.W., and Pasmore, W.A. (eds) *Research in Organizational Change and Development*, vol. 1, pp. 129-169. Stamford, CT: JAI Press.

Corti, L. Day, A., and Backhouse, D. (2000) Confidentiality and informed consent: Issues for consideration in the preservation of and provision of access to qualitative data archives (46 paragraphs). *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 18(3), Art. 7. Available at: http://www.qualitative-research.net/index.php/fqs/article/view/1024/2207 (Accessed 8 August 2019).

Cotterill, S.T. (2015) Tearing up the page: Re-thinking the development of effective learning environments in higher education. *Innovation in Education and Teaching International*, 52(4): 403-413.

Creswell, J.W. (2005) *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. 2nd ed. New Jersey: Pearson Education.

Creswell, J.W. (2007) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 2nd ed. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Creswell, J.W. (2014) *Research Design: Qualitative Quantitative, and Mixed Methods Approaches*. 4th ed. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Creswell, J.W., and Miller, D.L. (2000) Determining validity in qualitative inquiry. *Theory into Practice*, 39(3): 124-130.

Cummings, T. G., and Huse, E.F. (1989) *Organizational Development and Change*. St Paul: West.

Cummings, T.G., and Worley, C.G. (2009) *Organization Development & Change*. 9th ed. Mason: South-Western Cengage Learning.

Cunliffe, A.L. (2003) Reflexive inquiry in organizational research: Questions and possibilties. *Human Relations*, 56(8): 983-1003.

Cunliffe, A.L. (2004) On becoming a critically reflexive practitioner. *Journal of Management Education*, 28(4): 407-426.

Cuyvers, G. (2010) Appreciative inquiry as a foundation for quality development. *Revista de Cercetare si Interventie Sociala*, 30: 39-52.

Daft, R.L., and Weick, K. (1984) Toward a model of organizations as interpretive systems. *Academy of Management Review*, 9: 284-295.

Daher, M., Carré, D., Jaramillo, A., Olivares, H., and Tomicic, A. (2017) Experience and meaning in qualitative research: a conceptual review and a methodological device proposal (52 paragraphs). Forum Qualitative Sozialforschung / *Forum: Qualitative Social Research*, 18(3): 9, Art. 3. Available at: http://www.qualitative-research.net/index.php/fqs/issue/view/59 (Accessed 20 October 2018).

Davidson, M.C.G., and De Marco, L. (1999) Corporate change: Education as a catalyst. *International Journal of Contemporary Hospitality Management*, 11(1): 16-23.

Davies, J.L. (2001) The emergence of entrepreneurial culture in European universities. *Higher Education Management*, 13(2): 25-43.

Dawson, P. (1994) *Organizational Change: A Processual Approach*. London: Paul Chapman.

Deal, T.E., and Kennedy, A.A. (1982) *Corporate Cultures: The Rites and Rituals of Corporate Lfe*. Reading, MA: Addison-Wesley.

Debackere, K. (2000) Managing academic R&D as a business at K.U. Leuven: Context, structure, and process. *R&D Management*, 30(4): 323-328.

Debackere, K. (2008) Leuven as a hotspot for regional innovation. In: Wessner, C.W. (ed) *Innovative Flanders: Innovative Policies for the 21st Century*. Report of a symposium, pp. 80-84. Washington, D.C.: The National Academies Press. Available at: https://www.nap.edu/read/12092/chapter/9 (Accessed 18 July 2018).

De Boer, H. (2013) KU Leuven Institutional Report. *European Flagship Universities: Balancing Academic Excellence and Socio-Economic Relevance. FLAGSHIP Project*. Available at: http://www.sv.uio.no/arena/english/research/projects/flagship/institutional-reports/leuven.pdf (Accessed 26 June 2017).

De Boer, H., Enders, J., and Leisyte, L. (2007) Public sector reform in Dutch higher education: The organizational transformation of the university. *Public Administration*: 85(1): 27-46.

De Clercq, E. (2004) Editorial review. Antiviral research at the Rega Institute (KU Leuven), now 50 years old. *Antiviral Chemistry & Chemotherapy*, 15: 223-233.

De Wit, K. (2017) Quality assurance in Flanders: Towards high trust in the self-direction of higher education institutions. In: Georgios, S., Joshi, K.M., and Paivandi, S. (eds) *Quality Assurance in Higher Education: A Global Perspective*, pp. 69-84. New Delhi: Studera Press.

De Wit, K. (2018) World-class universities in Flanders (Belgium). In: Rabossi, M., Joshi, K.M., and Paivandi, S. (eds) *In Pursuit of World-Class Universities: A Global Experience*, pp. 19-35. New Delhi: Studera Press.

De Wit, K., and De Boer, H. (2010) Governance and funding reform in the European Higher Education Area. National system analysis: Belgium (Flanders). In: De Boer, H.F., Jongbloed B.W.A., Enders, J., and File, J. M. (eds*) Progress in Higher Education Reform across Europe: Governance Reform, vol.2.: Methodology, Performance Data, Literature Survey, National System Analyses and Case Studies*, pp. 130-146. Enschede: Center for Higher Education Policy Studies (CHEPS).

De Wit, K., and Verhoeven, J.C. (2004) Autonomy vs. Control. Quality Assurance and Governance in Flanders (Belgium). *Education Policy Analysis Archives*, 12(71). Available at: https://epaa.asu.edu/ojs/article/view/226 (Accessed 3 April 2018).

Deem, R. (1998) 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, 8(1): 47-70.

Deem, R. (2001) Globalization, 'new managerialism', academic capitalism and entrepreneurialism in universities: Is the local dimension still important? *Comparative Education*, 37(1): 7-20.

Deem, R., and Brehony, K.J. (2005) Management as ideology: The case of 'new managerialism' in higher education. *Oxford Review of Education*, 31(2): 217-235.

Denison, D.R. (1996) What *is* the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *Academy of Management Review*, 21(3): 619-654.

Dent, E.B. (2003) The complexity science organizational development practitioner. *Organizational Development Journal*, 21(2): 82-86.

Devos, G. and Buelens, M. (2003) Openness to organizational change: The contribution of content, context, and process. *Vlerick Leuven Gent Working Paper Series*, 06. Vlerick Leuven Gent Management School. Available at: https://public.vlerick.com/publications/de598e99-69a9-e011-8a89-005056a635ed.pdf (Accessed 22 November 2017).

Dill, D.D. (1997a) Effects of competition on diverse institutional contexts. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 88-105. San Francisco: Jossey-Bass.

Dill, D.D. (1997b) Focusing institutional mission to provide coherence and integration. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 171-190. San Francisco: Jossey-Bass.

Dill, D.D. (2012) The management of academic culture revisited: Integrating universities in an entrepreneurial age. In: Stensaker, B., Välimaa, J., and Sarrico, C. (eds*) Managing Reform in Universities: The Dynamics of Culture, Identity and organizational Change*, pp. 222-237. Basingstoke, UK: Palgrave Macmillan.

Dill, D.D., and Sporn, B. (1995) University 2001: What will the university of the twenty-first century look like? In: Dill, D.D., and Sporn, B. (eds) *Emerging Patterns of Social Demand and University Reform: Through a Glass Darkly*, pp. 212-236. New York: Pergamon Press.

Dolence, M.G., and Norris, D.M. (1995) *Transforming Higher Education: A Vision for Learning in the 21st Century*. Ann Arbor, MI: Society for College and University Planning.

Doyle, M., Claydon, T., and Buchanan, D. (2000) Mixed results, lousy process: The management experience of organizational change. *British Journal of Management*, 11(3): 59-80.

Drucker, P.F. (1954) *The Practice of Management*. New York: Harper & Row.

Duderstadt, J. J. (2000) *A University for the 21st Century*. Ann Arbor: The University of Michigan Press.

Duderstadt, J.J. (2001) Fire, ready, aim! University decision-making during an era of rapid change. In: Hirsch, W.Z., and Weber, L.E. (eds) *Governance in Higher Education: The University in a State of Flux*, pp. 26-51. London: Economica.

Dunphy, D., and Stace, D. (1993) The strategic management of corporate change. *Human Relations*, 46(8): 905-918.

Dyer, W.G. (1987) *Team Building: Issues and Alternatives*. 2nd ed. Reading, MA: Addison-Wesley.

Eckel, P., Hill, B., and Green, M. (1998) *On Change: En Route to Transformation*. Washington, DC: American Council on Education.

Edmondson, G. (2015) *Creating a Virtuous Circle in Technology Transfer: The Case of KU Leuven*. Science Business Publishing. Available at: http://bastion.wum.edu.pl/wp-content/uploads/2015/08/Bastion-report-single-view-AUG4.pdf (Accessed 20 February 2016).

Education, Audiovisual and Culture Executive Agency (EACEA) National Policies Platform. Development of Entrepreneurship Competence. Belgium (Flemish Community), March 2018. Brussels: European Commission. Available at: https://eacea.ec.europa.eu/national-

policies/en/content/youthwiki/38-development-entrepreneurship-competence-belgium-flemish-community (Accessed 8 June 2018).

Egan, T.M. (2002) Organization development: An examination of definitions and dependent variables. *Organization Development Journal*, 20(2): 59-71.

Ehlers, U-D., and Schneckenberg, D. (2010) Introduction: Changing cultures in higher education. In: Ehlers, U-D., and Schneckenberg, D. (eds) *Changing Cultures in Higher Education: Moving Ahead to Future Learning*, pp. 1-14. Heidelberg/London/New York: Springer.

Eisenhardt, K. (1989) Building theories from case study research. *Academy of Management Review*, 14(4): 532-550.

Elizur, D., and Guttman, L. (1976) The structure of attitudes toward work and technological change within an organization. *Administrative Science Quarterly*, 21(4): 611-622.

Elken, M., and Røsdal, T. (2017) Professional higher education institutions as organizational actors. *Tertiary Education and Management*, 23(4): 376-387.

El-Khawas, L. (2000) The impetus for organizational change: An exploration. *Tertiary Education and Management*, 6(1): 37-46.

Enders, J. (2001) Between state control and academic capitalism: A comparative perspective on academic staff in Europe. In: Enders, J. (ed) *Academic Staff in Europe: Changing Contexts and Conditions*, 1-23. Westport, CT: Greenwood Press.

Enders, J. (2013) The University in the audit society: On accountability, trust and markets. In: Engwall, L., and Scott, P. (eds) *Trust in Universities*, pp. 53-68. Wenner-Gren International Series, No. 86. London: Portland Press.

Esson, J., and Wang, K. (2018) Reforming a university during political transformation: A case study of Yangon University in Myanmar. *Studies in Higher Education*, 43(7): 1184-1195.

Euler, D. (2010) Shaping learning cultures: A strategic challenge for universities. In: Ehlers, U-D., and Schneckenberg, D. (eds) *Changing Cultures in Higher Education: Moving Ahead to Future Learning*, pp. 75-84. Heidelberg/London/New York: Springer.

European University Association (EUA) (2007) *Lisbon Declaration - Europe's Universities beyond 2010: Diversity with a Common Purpose*. Available at: http://www.eua.be/Libraries/quality-assurance/lisbon_declaration.pdf?sfvrsn=0 (Accessed 8 March 2018)

European University Association (EUA) (2017) *University Autonomy in Europe III: Country Profiles*. Available at: http://www.eua.be/Libraries/publications-homepage-list/university-autonomy-in-europe-iii-country-profiles (Accessed 20 March 2018)

Evans, L., Homer, M., and Rayner, S. (2013) Professors as academic leaders: The perspectives of 'the Led'. *Educational Management Administration & Leadership*, 41(5): 674-689.

Evans, L. (2015) A changing role for university professors? Professoral academic leadership as it is perceived by 'the led'. *Britisch Educational Research Journal*, 41(4): 666-685.

Evans, L (2016) *The purpose of Professors: Professionalism, Pressures and Performance – a Commissioned Stimulus Paper*. London: The Leadership Foundation for Higher Education.

Evans, L. (2017a) University professors as academic leaders: Professorial leadership development needs and provision. *Educational Management Administration & Leadership*, 45(1): 123-140.

Evans, L. (2017b) The worst of times? A tale of two higher education institutions in France: Their merger and its impact on staff working life. *Studies in Higher Education*, 42(9): 1699-1717.

Evans, L. (2018a) Re-shaping the EHEA after the demise of neoliberalism: A UK-informed perspective. In: Curaj, A., Deca, L., and Pricopie, R. (eds) *European Higher Education Area: The Impact of Past and Future Policies*, pp. 23-42. Dordrecht: Springer.

Evans, L. (2018b) *Professors as Academic Leaders: Expectations, Enacted Professionalism and Evolving Roles*. London: Bloomsbury.

Feldman, D.C. (1984) The development and enforcement of group norms. *The Academy of Management Review*, 9(1): 47-53.

Fernandez, S., and Rainey, H.G. (2006) Managing successful organizational change in the public sector. *Public Administration Review*, March-April: 168-176.

Fitzgerald, L., and McDermott, A.M. (2017) *Challenging Perspectives on Organizational Change in Health Care*. New York/London: Routledge.

Flyvbjerg, B. (2004) Five misunderstandings about case study research. In: Seale, C., Gobo, G., Gubrium, J.F., and Silverman, D. (eds) *Qualitative Research Practice*, pp. 420-434. Thousand Oaks, CA: Sage Publications.

Ford, J.D., Ford, L.W., and D'Amelio, A. (2008) Resistance to change: The rest of the story. *Academy of Management Review*, 33(2): 362-377.

Fralinger, B., and Olson, V. (2007) Organizational culture at the university level: A study using the OCAI instrument. *Journal of College Teaching & Learning*, 4(11): 85-98.

French, W.L. and Bell Jr., C. H. (1999) *Organization Development Behavioral Science Interventions for Organization Improvement*. 6th ed. New Jersey: Prentice Hall.

Fullan, M., Hill, P., and Crévola, C. (2006) *Breakthrough*. Toronto: Corwin Press.

Fumasoli, T., and Stensaker, B. (2013) Organizational studies in higher education: A reflection on historical themes and prospective trends. *Higher Education Policy*, 26: 479-496.

Fumasoli, T., Gornitzka, Å., and Maassen, P. (2014) University autonomy and organizational change dynamics. *ARENA Working Paper No. 8*. University of Oslo: ARENA Center for European Studies.

Fyen, W. (2016) The Leuven Community for Innovation Driven Entrepreneurship (Lcie): A student-driven initiative to foster entrepreneurship and entrepreneurial skills at a research-intensive university. Pilots, demos, and experimental case. In: Aalto, A., and Montonen, L. (eds) *Smart Cities in Smart Regions 2016. Conference Proceedings*, pp. 37-46. Lahti: Lahti University of Applied Sciences.

Fyen, W., Debackere, K., Olivares, M., Gfrörer, R., Stam, E., Mumby-Croft, B., and Keustermans, L. (2019) Student entrepreneurship at research-intensive universities: From a peripheral activity towards a new mainstream. *LERU Advice Paper*, no. 25. Leuven, Belgium: LERU Publications.

Galbraith, J.R. (1974) Organization design: An information processing view. *Interfaces*, 4(3): 28-36.

George, J.M., and Jones, G.R. (1995) *Understanding and Managing Organizational Behavior*. Reading, MA: Addison-Wesley.

George, J.M., and Jones, G.R. (1997) Organizational spontaneity in context. *Human Performance*, 10(2): 153-170.

Gersick, C. J.G. (1991) Revolutionary change theories: A multilevel exploration of the punctuated equilibrium paradigm. *Academy of Management Review*, 16: 10-36.

Gioia, D.A., and Thomas, J.B. (1996) Identity, image, issue interpretation: Sensemaking during strategic change in academia. *Administrative Science Quarterly*, 41(3): 370-403.

Goffee, R., and Jones, G. (1996) What hold the modern company together? *Harvard Business Review*, 74(6): 133-148.

Goode, J. (2000) Is the position of women in higher education changing? In: Tight, M. (ed) *Academic Work and Life: What is to be an Academic, and how this is Changing*, pp. 243-284. Oxford: Elsevier Science.

Goodstein, L. D., and Burke, W.W. (1991) Creating successful organization change. *Organizational Dynamics*, 19(4): 5-17.

Gornall, L., and Salisbury, J. (2012) Compulsive working, 'hyperproffesionality' and the unseen pleasures of academic work. *Higher Education Quarterly*, 66(2): 135-54.

Gosselink, R., and Pollefeyt, D. (2014) *Vision and policy plan education and students 2014-2017*. Available at: https://www.kuleuven.be/english/education/policy/vision-and-policy-plan (Accessed 8 February 2016)

Graham, J., Grewal, I., and Lewis, J. (2007) *Ethics in Social Research: the Views of Research Participants*. London: Government Social Research Unit, Cabinet Office. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/497221/ethics_participants_tcm6-5783.pdf (Accessed 16 January 2018).

Grant, D., Keenoy, T., and Oswick, C. (2001) Organizational discourse: Key contributions and challenges. *International Studies of Management and Organization*, 31(3): 5-24.

Greenwood, R., and Hinings, C.R. (1993) Understanding Strategic Change: The contribution of archetypes. *Academy of Management Journal*, 36(5): 1052-1081.

Greiner, L.E. (1972) Evolution and revolution as organizations grow. *Harvard Business Review*, 50(4): 37-46.

Grundy, T. (1993) *Managing Strategic Change*. London: Kogan Page.

Grunow, D. (1995) The research design in organization studies: problems and prospects. *Organization Science*, 6(1): 93-103.

Guba, E.G., and Lincoln, Y.S. (1989) *Fourth Generation Evaluation*. Newbury Park, CA: Sage Publications.

Guba, E.G., and Lincoln, Y.S. (1994) Competing paradigms in qualitative research. In: Denzin, N., and Lincoln, Y.S. (eds) *Handbook of Qualitative Research*, pp. 105-117. Thousand Oaks, CA: Sage Publications.

Hackman, J. R. (1992) The psychology of self-management in organizations. In: Glaser, R. (ed) *Classic Readings in Self-Managing Teamwork,* pp.143-193. King of Prussia, PA: Organization Design and Development.

Hackman, J.R. (2002) *Leading Teams: Setting the Stage for Great Performances*. Boston: Harvard Business School Press.

Halász, G. (2010) Organizational change and development in higher education. In: Huisman, E., and Pausits, A. (ed) *Higher Education Management and Development: Compendium for Managers*, pp. 51-64. Münster: Waxmann Verlag GmbH.

Halsey, A.H. (1995) *Decline of Donnish Dominion: The British Aademic Professions in the Twentieth Century*. 2nd ed. Oxford: Clarendon Press.

Hammersley, M., and Gomm, R (1997) Bias in social research. *Sociological Research Online*, 2(1): 1-13.

Hardy, P., and Rossi, M. (2008) Developing competencies, entrepreneurship, and innovation: Tools and case study. *The International Journal of Knowledge, Culture and Change Management*, 8(5): 139-148.

Hargrave, T.J., and Van de Ven, A.H. (2006) A collective action model of institutional innovation. *Academy of Management Review*, 31(4): 864-888.

Harrison, R. (1995) *The Collected papers of Roger Harrison*. London: McGraw-Hill.

Hartley, J., Benington, J., and Binns, P. (1997) Researching the role of internal-change agents in the management of organizational change. *British Journal of Management*, 8(1): 61-73.

Harvey, L. (2005) A history and critique of quality evaluation in the United Kingdom. *Quality Assurance in Education*, 13(4): 263-76.

Harvey, T.R., and Broyles, E.A: (2010) *Resistance to Change: A Guide to Harnessing its Positive Power*. Maryland: Rowman & Littlefield Education.

Hayes, N. (1997) Theory-led thematic analysis: Social identification in small companies. In: Hayes, N. (ed) *Doing Qualitative Analysis in Psychology*, pp. 93-114. Hove, UK: Psychology Press.

Heidegger, M. (1962) *Being and Time*. New York: Harper & Row.

Hénard, F., and Roseveare, D. (2012*) Fostering Quality Teaching in Higher Education: Policies and Practices. IMHE Guide for Higher Education Institutions*. OECD. Available at: https://www.oecd.org/edu/imhe/QT%20policies%20and%20practices.pdf (Accessed 20 April 2017).

Henkel, M. (2005) Academic identity and autonomy in a changing policy environment. *Higher Education*, 49: 155-176.

Hermon-Taylor, R.J. (1985) Finding new ways of overcoming resistance to change. In: Pennings, J.M. (ed) *Organizational Strategy and Change*, pp. 383-411. San Francisco: Jossey- Bass.

Herold, D.M., Fedor, D.B., and Caldwell, S.D. (2007) Beyond change management: A multilevel investigation of contextual and personal influences on employee commitment to change. *Journal of Applied Psychology*, 92(4): 942-951.

Higgs, M., and Rowland, D. (2005) All changed great and small: Exploring approaches to change and its leadership. *Journal of Change Management*, 5(2): 121-151.

Hooker, M. (1997) The transformation of higher education. In: Oblinger, D.G., and Rush, S.C. (eds) *The Learning Revolution*, pp. 20-34. Bolton, MA: Anker Publishing Company.

Huisman, J., Boezerooij, P., and Van der Wende, M. (2007) The need for E-learning strategies: Higher education institutions and their responses to a changing environment. *Tertiary Education and Management*, 13(4): 313-330.

Hunt, J. G. (1991) *Leadership: A New Synthesis*. Newbury Park, CA: Sage Publications.

Hurley, J.P. (1990) Organizational development in universities. *Journal of Managerial Psychology*, 5(1): 17-22.

Huy, O.N. (2001) Time, temporal capability and planned change. *Academy of Management Review*, 26(4): 601-623.

James, L.R., Choi, C.C., Ko, C.-H. J., McNeil, P.K., Minton, M.K., Wright, M.N., and Kim, K-il. (2008) Organizational and psychological climate: A review of theory and research. *European Journal of Work and Organizational Psychology*, 17(1): 5-32.

Janićijević, N. (2013) The mutual impact of organizational culture and structure. *Economic Annals*, LVIII (198): 35-60.

Jensen, H.S. (2010) The organization of the university. *Working Papers on University Reform. Working Paper 14*. EPOKE, Department of Education, Aarhus University. Available at: http://edu.au.dk/fileadmin/www.dpu.dk/forskning/forskningsprogrammer/epoke/workingpapers/WP_14.pdf (Accessed 20 May 2019).

Johns, G. (2001) In praise of context. *Journal of Organizational Behavior*, 22:31-42.

Johnson, D. M. (2004) Adaptation of organizational change models to the implementation of quality standard requirements. *International Journal of Quality & Reliability Management*, 21(2): 154-174.

Jones, B.B., and Brazzel, M. (2006) *The NTL Handbook of Organizational Development and Change: Principles, Practices and Perspectives*. San Francisco: Pfeiffer.

Jones, G. (2006) The essential impact of context on organizational behavior. *Academy of Management Review*, 31(2): 396-408.

Jones, G. R. (2010) *Organizational Theory, Design, and Change*. 6th ed. Boston, MA: Pearson.

Isaksen, S.G., Lauer, K.J., Ekvall, G., and Britz, A. (2001) Perceptions of the best and worst climates for creativity: Preliminary validation evidence for the situational outlook questionnaire. *Creativity Research Journal*, 13(2): 171-184.

Isaksen, S.G., and Ekvall, G. (2010) Managing for innovation: The two faces of tension in creative climates. *Creativity and Innovation Management*, 19(2): 73-88.

Kanter, R.M. (1983) *The Change Masters: Innovation ad Entrepreneurship in the American Corporation.* New York: Simon & Schuster.

Kanter, R.M., Stein, B.A., and Jick, T.D. (1992) *The Challenge of Organizational Change*. New York: The Free Press.

Kaplan, A. (2000) Capacity building: Shifting the paradigm of practice. *Development in Practice*, 10(3): 517-526.

Katz, D., and Kahn, R.L. (1978) *The Social Psychology of Organizations*. New York: Wiley.

Kezar, A.J. (2001) *Understanding and Facilitating Change in Higher Education in the 21st Century*. *Recent Research and Conceptualizations*. ASHE-ERIC Higher Education Report, 28(4). San Francisco: Jossey-Bass.

Kezar, A.J., and Eckel, P.D. (2003) The effect of institutional culture on change strategies in higher education: Universal principals or culturally responsive concepts? *The Journal of Higher Education*, 73(4): 435-460.

Kezar, A.J. (2018) A new vision for the professoriate. *Change: The Magazine of Higher Learning*, 50(3-4): 84-87.

Kickert, W.J.M. (2010) Managing emergent and complex change: The case of Dutch agencification. *International Review of Administrative Sciences*, 76(39: 489-515.

Kinnear, C., and Roodt, G. (1998) The development of an instrument for measuring organizational inertia. *Journal of Industrial Psychology*, 24(2): 44-54.

Kirton, M. (1980) Adaptors and innovators in organizations. *Human Relations*, 33(4): 213-224.

Klein, K.J., and Kozlowski, S.W.J. (2000) From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods,* 3: 211-236.

Klein, H.K., and Myers, M.D. (1999) A set of principles for conducting and evaluating field studies in information systems. *MIS Quarterly*, 23(1): 67-94.

Kolsaker, A. (2008) Academic professionalism in the managerialist era: A study of English universities. *Studies in Higher Education*, 33(5): 513-525.

Kondakci, Y., and Van den Broeck, H. (2009) Institutional imperatives versus emergent dynamics: A case study on continuous change in higher education. *Higher Education*, 58: 439-464.

Kondakci, Y., Van den Broeck, H., and Devos, G. (2006) More management concepts in the academy: Internationalization as an organizational change process. *Vlerick Leuven Gent Working Paper Series*, 28: 1-24.

Kotter, J. P. (1996) *Leading Change*. Boston, MA: Harvard Business School Press.

Kotter, J. P. (1999) *On What Leaders Really Do*. Boston, MA: Harvard Business School Press.

Kováts, G. (2018) The change of organizational structure of higher education institutions in Hungary: A contingency theory analysis. *International Review of Social Research*, 8(1): 74-86.

Kuh, G.D., and Whitt, E.J. (1988) *The Invisible Tapestry: Culture in American Colleges and Universities*. ASHE-ERIC Higher Education Report no.1. Washington, DC: Association for the Study of Higher Education. Available at: https://files.eric.ed.gov/fulltext/ED299934.pdf (Accessed 28 March 2018).

Kvale, S. (2009) *Doing Interviews*. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Lacey, M.Y. (1995) Internal consulting: Perspectives on the process of planned change. *Journal of Organizational Change Management*, 8(3): 75-84.

Laloux, F. (2014) *Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness*. Brussels: Nelson Parker.

Lamidi, K., and Williams, D. (2014) Leading transformational change in HEIs: Discussion of literature and conceptual framework. *Proceedings from the University-Industry Interaction Conference: Challenges and Solutions for Fostering Entrepreneurial Universities and Collaborative Innovation*, Barcelona, Spain, pp. 46-99. Available at: https://www.researchgate.net/profile/Kafayat_Lamidi/publication/269109731_Leading_Transformational_Change_in_HEIs_Discussion_of_Literature_and_Conceptual_Framework/links/573f4f0f08ae9ace841342fa.pdf (Accessed 8 March 2017).

Lapadat, J.C., and Lindsay, A.C. (1999) Transcription in research and practice: From standardization of technique to interpretive positionings. *Qualitative Inquiry*, 5(1): 64-86.

Lau, C.-M., and Woodman, R.W. Understanding organizational change: A schematic perspective. *The Academy of Management Journal*, 38(2): 537-554.

Laukkanen, M. (2003) Exploring academic entrepreneurship: Drivers and tensions of university-based business. *Journal of Small Business and Enterprise Development*, 10(4): 372-382.

Lawrence, P.R., and Lorsch, J.W. (1986) *Organization and Environment: Managing Differentiation and Integration*. 2nd ed. Boston, MA: Harvard Business School Press.

Lee, C.B., Chen, M.S., Powell, M., and Chu, C., M.-Y. (2014) Achieving organizational change: Findings from a case study of health promoting hospitals in Taiwan. *Health Promotion International*, 29(2): 296-305.

Leitko, T.A., and Szczerbacki, D. (1987) Why traditional OD Strategies Fail in Professional Bureaucracies. *Organizational Dynamics*, 15(3): 52-65.

Levy, A., and Merry, U. (1986) *Organizational Transformation: Approaches, Strategies, Theories*. New York: Praeger Publishers.

Lewin, K. (1951) *Field Theory in Social Science*. New York: Harper.

Lewin, K. (1959) Group decisions and social change. In: Maccoby, E.E., Newcomb, T.M., and Hartley, E.L. (eds) *Readings in Social Psychology*. 3rd ed., pp. 197-211. London: Methuen.

Lewis, L. (2009) Redefining qualitative methods: Believability in the fifth moment. *International Journal of Qualitative Methods (IJQM)*, 8(2): 1-14.

Lewis, J., Ritchie, J., Ormston, R., and Morrell, G. (2014) In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 347-366. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Lincoln, Y.S, Lynham S.A., and Guba, E.G. (2018) Paradigmatic controversies, contradictions, and emerging confluences, revisited. In: Denzin, N.K., and Lincoln, Y.S. (eds)

The SAGE Handbook of Qualitative Research. 5th ed., pp. 108-150. Thousand Oaks, CA: Sage Publications.

Lippitt, R., Watson, J., and Westley, B. (1958) *The Dynamics of Planned Change*. New York: Harcourt Brace and World.

Litwin, G.H., and Stringer, R.A. (1968) *Motivation and Organizational Climate*. Boston, MA: Harvard Business School Press.

Litwin, G.H., Humphrey, J.W., and Wilson, T.B. (1978) Organizational climate: A proven tool for improving performance. In: Burke, W.W. (ed) *The Cutting Edge: Current Theory and Practice in Organization Development*, pp. 187-205. La Jolla, CA: University Associates.

Lunenburg, F.C. (2010) Managing change: The role of the change agent. *International Journal of Management, Business, and Administration*, 13(1): 1-6.

Lunenburg, F.C. (2012) Organizational structure: Mintzberg's framework. *International Journal of Scholarly, Academic, Intellectual Diversity*, 14(1): 1-8. Available at: https://de.scribd.com/document/179895493/Lunenburg-Fred-C-Organizational-Structure-Mintzberg-Framework-IJSAID-V14-N1-2012-pdf (Accessed 21 February 2018).

Lybeck, E. (2018) Reconstructing higher education. *On_Education: Journal for Research and Debate*, 1(3): 1-6. Available at: https://www.oneducation.net/wp-content/uploads/2018/12/10.17899_on_ed.2018.3.5.pdf (Accessed 8 May 2019).

Lynch, M. (2000) Against reflexivity as an academic virtue and source of privileged knowledge. *Theory, Culture & Society*, 17(3): 26-54.

Macredie, P., Sandom, C., and Paul, R.J. (1998) Modelling for change: An information systems perspective on change management models. In: Macredie, P., Paul, R., Anketell, D., Lehaney, B., and Warwick, S. (eds) *Modelling for Added Value*, pp. 3-16. London: Springer.

Malterud, K. (2001) Qualitative research: Standards, challenges, and guidelines. *The Lancet*, 358: 483-488.

Manning, K. (2013) *Organizational Theory in Higher Education*. New York and London: Routledge.

March, J.G. (1981) Footnotes to organizational change. *Administrative Science Quarterly,* 26(4): 563-577.

Marshak, R.J. (2002) Changing the language of change: How new contexts and concepts are challenging the ways we think and talk about organizational change. *Strategic Change,* 11: 279-286.

Marshak, R.J. (2005) Introduction: Transforming thoughts about change. *Journal of Applied Behavioral Science,* 41(2): 157-160.

Marshak, R.J., and Heracleos, L. (2005) A discursive approach to organizational development. *Action Research,* 3(1): 69-88.

Marshak, R.J., and Grant, D. (2008) Organizational discourse and new organizational development practices. *British Journal of Management*, 19: 7-19.

Martin, J. (1992) *Cultures in Organizations: Three Perspectives*. New York, NY: Oxford University Press.

Martin, J. (2002) *Organizational Culture: Mapping the Terrain*. Thousand Oaks, CA: Sage Publications.

Martin, P.Y., and Turner, B.A. (1986) Grounded theory in organizational research. *The Journal of Applied Behavioral Science*, 22(2): 141-157.

Martins, E.C., and Terblanche, F. (2003) Building organizational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, 6(1): 64-74.

Martins, N., and Coetzee, M. (2009) Applying the Burke-Litwin model as a diagnostic framework for assessing organizational effectiveness. *SA Journal of Human Resource Management*, 7(1): 1-13.

Mauthner, N.S., and Doucet, A. (2003) Reflexive accounts and accounts of reflexivity in qualitative data analysis. *Sociology*, 37(3): 413-431.

Maxwell, J.A. (1992) Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3): 279-300.

Maxwell, J.A. (2005) *Qualitative Research Design: An Interactive Approach*. 2nd ed. Thousand Oaks, CA: Sage Publications.

Mazzeo, C., Rab, S., and Eachus, S. (2003) Work-first or work-only: Welfare reform, state policy and access to postsecondary education. *Annals of the American Academy of Political and Social Science*, 586(1): 144-171.

McGaghie, W.C., Bordage, G., and Shea, J.A. (2001) Problem statement, conceptual framework, and research question. *Academic Medicine*, 76(9): 923-924.

McKenzie, D. (2017*) Organizational Learning in the University: A Case study of Change in Higher Education*. Doctoral dissertation, University of Glasgow, UK. Available at: http://theses.gla.ac.uk/8210/ (Accessed 14 June 2018).

McNay, I. (1995) From the collegial academy to corporate enterprise: The changing culture of universities. In: Schuller, T. (ed) *The Changing University*, pp. 105-115. Buckingham: SRHE & Open University Press.

McNay, I. (2006) Managing institutions in a mass higher education system. In: McNay, I. (ed) *Beyond Mass Higher Education: Building on Experience*, pp. 161-171. Maidenhead: SRHE & Open University Press.

McNay, I. (2007) Values, principles, and integrity: Academic and professional standards in UK higher education. *Journal of the Programme on Institutional Management in Higher Education: Higher Education Management and Policy (OECD)*, 19(3): 43-66.

Mehra, B. (2002) Bias in qualitative research: Voices from the online classroom. The *Qualitative Report*, 7(1): 1-19.

Mele, C., Pels, J., and Polese, F. (2010) A brief review of systems theories and their managerial applications. *Service Science*, 2(1-2): 126-135.

Merriam, S.B. (1998) *Qualitative Research and Case Study Applications in Edu*cation. San Francisco: Jossey-Bass.

Merriam, S.B. (2002) *Qualitative Research in Practice: Examples for Discussion and Analysis*. San Francisco: Jossey-Bass.

Merriam, S.B. (2009) *Qualitative Research: A Guide to Design and Implementation*. San Francisco: Jossey-Bass.

Merriam, S.B., Johnson-Bailey, J., Lee, M.J., Kee, Y., Ntseane, G., and Muhamad, M. (2001) Power and Positionality: Negotiating insider/outsider status within and across cultures. *International Journal of Lifelong Education*, 20(5): 405-416.

Meyer, L.H. (2007) Collegial participation in university governance: A case study of institutional change. *Studies in Higher Education*, 32(2): 225-235.

Meyer, C.B., and Stensaker, I.G. (2006) Developing Capacity for Change. *Journal of Change Management*. 6(2): 217-231.

Miles, R.H. (1997) *Leading Corporate Transformation*. San Francisco: Jossey-Bass.

Miles, M.B., and Huberman, A.M. (1994) *Qualitative Data Analysis*. 2nd ed. Thousand Oaks, CA: Sage Publications.

Miles, R.E., Snow, C.C., Meyer, A.D., and Coleman, H.J. (1978) Organizational strategy, structure, and process. *Academy of Management Review*, 3(3): 546-562.

Miller, D. (1982) Evolution and revolution: A quantum view of structural change in organizations. *Journal of Management Studies*, 19(2): 131-151.

Miller, V.D., Johnson, J.R., and Grau, J. (1986) Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research*, 22(1): 59-80.

Mills, J., and Birks, M. (2014) *Qualitative Methodology: A Practical Guide*. London, Los Angeles, New Delhi, Singapore, Washington DC: Sage Publications.

Mintzberg, H. (1979) *The Structuring of Organizations*. New Jersey: Prentice Hall.

Morgan, G. (2011) Reflection on images of organization and its implications for organization and environment. *Organization & Environment*, 24(4): 459-478.

Morgan, P. (2005) *The Idea and Practice of Systems Thinking and Their Relevance for Capacity Development*. European Center for Development Policy Management (ECDPM). Maastricht: ECDPM.

Mowday, R.T., and Sutton R.I. (1993) Organizational behavior: Liking individuals and groups to organizational contexts. *Annual Review of Psychology*, 44: 195-229.

Mudge, S.L. (2008) What is neo-liberalism? *Socio-Economic Review*, 6(4): 703-731.

Nadler, D. A. (1998) *Champions of Change: How CEO's and Their Companies are Mastering the Skills of Radical Change*. San Francisco: Jossey-Bass.

Nadler, D.A., and Tushman, M. L. (1977) A diagnostic model for organization behavior. In: J.R. Hackman, E.E. Lawler, and L.W. Porter (eds) *Perspectives on Behavior in Organizations*, pp. 85-100. New York: McGraw-Hill.

Naidoo, R., and Williams, J. (2015) The neoliberal regime in English higher education: Charters, consumers and the erosion of the public good. *Critical Studies in Education*, 56(2): 208-223.

Neuman, W.L. (2011) *Social Research Methods: Qualitative and Quantitative Approaches*. 7th ed. Boston, MA: Pearson.

Neumann, A., and Larson, R.S. (1997) Enhancing the leadership factor in planning. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 191-203. San Francisco: Jossey-Bass.

Newfield, C. (2008) Unmaking the Public University: The Fourty-Year Assault on the Middle Class. Cambridge, MA: Harvard University Press.

Newfield, C. (2016) The Great Mistake: How We Wrecked Public Universities and How We Can Fix Them (Critical University Studies). Baltimore: Johns Hopkins University Press.

Newman, F., Couturier, L., and Scurry, J. (2004) *The Future of Higher Education: Rhetoric, Reality, and the Risks of the Market.* San Francisco: Jossey-Bass.

Newton, J. (2003) Implementing an institution-wide learning and teaching strategy: Lessons in managing change. *Studies in Higher Education*, 28(4): 427-41.

Nielsen, W. R., Saccoman, J. L., and Nycodym, N. (1995) Individual influence in organizational change. *Leadership & Organization Development Journal*, 16(1): 35-39.

Nutt, P.C. (1986) Tactics of implementation. *Academy of Management Journal* (29): 230-261.

Nutt, P.C., and Backoff, R.W. (1997) Organizational transformation. *Journal of Management Inquiry*, 6(3): 235-54.

O'Brien, G. (2002) Participation as the key to successful change – public sector case study. *Leadership & Organizational Development Journal*, 23(8): 442:455.

Okhuysen, G.A. (2001) Structuring change: Familiarity and formal interventions in problem-solving groups. *Academy of Management Journal*, 44(4): 794-808.

Olivier, B.H. (2017) The use of mixed-methods research to diagnose the organizational performance of a local government. *SA Journal of Industrial Psychology*, 43: 1-14.

Olson, E.E., and Eoyang, G.H. (2001) *Facilitating Organizational Change: Lessons from Complexity Science*. San Francisco: Jossey-Bass.

Olssen, M., and Peters, M. A. (2005) Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy*, 20(3): 313-345.

Oreg, S. (2006) Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, 15(1): 73-101.

Oreg, S., Vakola, M., and Armenakis, A. (2011) Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *The Journal of Applied Behavioral Science*, 47(4): 461-524.

Organization for Economic Cooperation and Development (OECD) (2016) *Science, Technology, and Innovation Outlook 2016. Country Profile Belgium*. Paris: OECD. Available at: https://read.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-innovation-outlook-2016/belgium_sti_in_outlook-2016-48-en#page2 (Accessed 11 March 2018).

Orlikowski, W.J. (1996) Improvising organizational transformation over time: A situated change perspective. *Information Systems Research*, 7(1): 63-92.

Orlikowski, W.J., and Baroudi, J.J. (1991) Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1): 1-28.

Ormston, R., Spencer, L., Barnard, M., and Snape, D. (2014) The foundations of qualitative research. In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 1-25. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Örtenblad, A. (2001) On differences between organizational learning and learning organization. *The Learning Organization*, 8(3): 125-133.

Ostroff, C., Kinicki, A.J., and Muhammad, R.S. (2013) Organizational culture and climate. In: Weiner, I.B., Schmitt, N.W., and Highhouse, S. (eds) *Handbook of Psychology*, Vol. 12: Industrial and organizational psychology, pp. 643-676. Hoboken, NJ: John Wiley & Sons.

Oswick, C., Grant, D., Michelson, G., and Wailes, N. (2005) Looking forwards: Discursive directions in organizational change. *Journal of Organizational Change Management*, 18(4): 383-390.

Oterkiil, C., and Ertesvåg, S.K. (2012) Schools' readiness and capacity to improve matter. *Education Inquiry*, 3(1): 71-92.

Palmer, I., and Dunford, R. (2002) Who says change can be managed? Positions, perspectives and problematics. *Strategic Change*, 11(5): 243-251.

Paradeise, C., and Thoenig, J.-C. (2013) Academic institutions in search of quality: Local orders and global standards. *Organization Studies*, 34(2): 189-218.

Patnaik, E. (2013) Reflexivity: Situating the researcher in qualitative research. *Humanities and Social Science Studies*, 2(2): 98-106.

Patton, M.Q. (2002) *Qualitative Research and Evaluation Methods*. 3rd ed. Thousand Oaks, CA: Sage Publications.

Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*. Beverly Hills, CA: Sage.

Peters, T.J., and Waterman, R.H., Jr. (1982) *In Search of Excellence: Lessons from America's Best-Run Companies.* New York: Harper & Row.

Peterson, M.W., and Spencer, M. (1991) Understanding academic culture and climate. In: Peterson M.W. (ed) *ASHE Reader on Organization and Governance in Higher Education.* 4th ed., pp. 140-155. Needham Heights, MA: Simon & Schuster.

Peterson, M.W. (1997) Using contextual planning to transform institutions. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 127-157. San Francisco: Jossey-Bass.

Peterson, M.W., and Dill, D.D. (1997) Understanding the competitive environment of the postsecondary knowledge industry. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Redesigning Postsecondary Institutions*, pp. 3-29. San Francisco: Jossey-Bass.

Peterson, M.W. (2007) The study of colleges and universities as organizations. In: Gumport, P.J. (ed) *Sociology of Higher Education: Contributions and Their Contexts*, pp. 147-184. Baltimore, MD: Johns Hopkins University Press.

Pettigrew, A.M. (1985) *The Awakening Giant: Continuity and Change in Imperial Chemical Industries*. Oxford: Blackwell Publishers.

Pettigrew, A.M. (1987) Context and action in the transformation of the firm. *Journal of Management Studies*, 24(6): 649-670.

Pettigrew, A.M. (1990) Longitudinal field research on change: Theory and practice. *Organization Science*, 1(3): 267-292).

Pettigrew, A.M., Woodman, R.W., and Cameron, K.S. (2001) Studying organizational change and development: Challenges for future research. *The Academy of Management Journal*, 44(4): 697-713.

Pichault, F. (2007) HRM-based reforms in public organizations: Problems and perspectives. *Human Resource Management Journal*, 17(3): 265-282.

Piderit, S.K. (2000) Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review*, 25(4): 783-794.

Pillow, W. (2003) Confession; catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research. *International Journal of Qualitative Studies in Education*, 16(2): 175-196.

Pittman, J. (2004) Living sustainability through higher education: A whole systems design approach to organizational change. In: Corcoran, P.B., and Wals, A. (eds) *Higher Education and the Challenge of Sustainability: Problematics, Promise, and Practice*, pp. 199-212. Dordrecht: Kluwer Academic Publishers.

Polit, D.F., and Beck, C.T. (2014) *Essentials of Nursing Research: Appraising Evidence for Nursing Practice*. 8th ed. Philadelphia, PA: Wolters Kluwer Health.

Poole, M. S., Van De Ven, A.H., Dooley, K., and Holmes M.E. (2000) *Organizational Change and Innovation Processes: Theory and Methods for Research*. New York: Oxford University Press.

Porras, J.I., and Hoffer, S.J. (1986) Common behavior changes in successful organization development efforts. *Journal of Applied Behavioral Science*, 22 (4): 477-494.

Porras, J.I., and Robertson, P.J. (1992) Organizational development: Theory, practice and research. In: Dunnette, M., and Hough, L. (eds) *Handbook of Industrial Organizational Psychology*. 2nd ed. Vol. 3, pp. 720-822. Palo Alto, CA: Consulting Psychologists Press, Inc.

Porter, S. (1993) Nursing research conventions: Objectivity or obfuscation*? Journal of Advanced Nursing*, 18(1): 137-143.

Prahalad, C.K., and Hamel, G. (1990) The core competence of the corporation. *Harvard Business Review*, 68: 79-91.

Preissle, J. (2008) Subjectivity statement. In: Given, L.M. (ed) *The Sage Encyclopedia of Qualitative Research Methods*. Vol. 2, pp. 844-845.

Prichard, C., and Willmott, H. (1997) Just how managed is the McUniversity? *Organization Studies*, 18(2): 287-316.

Probst, B. (2015) The eye regards itself: Benefits and challenges of reflexivity in qualitative social work research. *Social Work Research*, 39(1): 37-48.

Punch, K.F. (1998) *Introduction to Social Research: Quantitative & Qualitative Approaches*. London/Thousand Oaks/New Delhi: Sage Publications.

Qu, S.Q., and Dumay, J. (2011) The qualitative research interview. *Qualitative Research in Accounting & Management*, 8(3): 238-264.

Ravitch, S.M., and Mittenfelner Carl, N. (2015) *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological*. London/Thousand Oaks/New Delhi: Sage Publications.

Raaper, R. (2016) Academic perceptions of higher education assessment processes in neoliberal academia. *Critical Studies in Education*, 57(2): 175-190.

Rallis, S.F., and Rossman, G.B. (2010) Caring reflexivity. *International Journal of Qualitative Studies in Education*, 23(4): 495-499.

Rees, G., and Hall, D. (2016) Managing change. In: Rees, G., and French, R. (eds) *Leading, Managing and Developing People*. 5th ed., pp.103-128. London: Chartered Institute of Personnel and Development.

Reeves, C.A., and Bednar, D.A. (1994) Defining quality: Alternatives and implications. *Academy of Management Review*, 19(3): 419-445.

Reynolds, M., and Holwell, S. (2010) Introducing systems approaches. In: Reynolds, M., and Holwell, S. (eds) *Systems Approaches to Managing Change: A Practical Guide*, pp. 1-23. London: Springer.

Rhoades, G. (2010) Envisaging invisible workforces: Enhancing intellectual capital. In: Gordon, G., and Whitchurch, C. (eds) *Academic and Professional Identities in Higher Education: The Challenges of a Diversifying Workforce*, pp. 35-53. New York: Routledge.

Rice, G. (2010) Reflections on interviewing elites. *Area*, 42(1): 70-75.

Ritchie, J., and Ormston, R. (2014) The applications of qualitative methods to social research. In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 28-46. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Ritchie, J., Lewis, J., Elam, G., Tennant, R., and Rahim, N. (2014) Designing and selecting samples. In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 111-145. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Robertson, C., Robins, A., and Cox, R. (2009) Co-constructing an academic community ethos – challenging culture and managing change in higher education: A case study undertaken over two years. *Management in Education*, 23(1): 32-40.

Rogers, E.M. (2003) *Diffusion of Innovations*. New York: Free Press.

Rothaermel, F.T., Agung S.D., and Jiang, L. (2007) University entrepreneurship: A taxonomy of the literature. *Industrial and Corporate Change*, 16(4): 691-791.

Roulston, K., and Shelton, S.A. (2015) Reconceptualizing bias in teaching qualitative research methods. *Qualitative Inquiry*, 21(4): 332-342.

Rowley, J. (2002) Using case studies in research. *Management Research News*, 25(1): 16-27.

Ruben, D.B. (2005) The Center for Organizational Development and Leadership at Rutgers University: A case study. *Advances in Developing Human Resources*, 7(3): 368-395.

Russ-Eft, D., and Preskill, H. (2001) *Evaluation in Organizations: A Systemic Approach to Enhancing Learning, Performance, and Change*. New York: Basic Books.

Ryan, G.W., and Bernard, H.R. (2000) Data management and analysis methods. In: Denzin, N.K., and Lincoln, Y.S. (eds) *Handbook of Qualitative Research*. 2nd ed., pp. 769-802. Thousand Oaks, CA: Sage Publications.

Saldaña, J. (2009) *The Coding Manual for Qualitative Researchers*. London: Sage Publications.

Santos, F., Heitor, M.V., and Caraca, J. (1998) Organizational challenges for university. *Higher Education Management*, 10(3): 87-108.

Schein, E.H. (1983) The role of the founder in creating organizational cultures. *Organizational Dynamics*, 12(1): 13-28.

Schein, E.H. (1996) Kurt Lewin's change theory in the field and in the classroom: Noted toward a model of managed learning. *Systems Practice*, 9(1): 27-47.

Schein, E.H. (2004) *Organizational Culture and Leadership*. 3rd ed. San Francisco: Jossey-Bass.

Schneider, B., and Reichers, A. (1983) On the etiology of climates. *Personnel Psychology*, 36(1): 19-39.

Schoenfeld, C. (1994) Campus cultures in conflict. *CUPA Journal*, 45(4): 29-33.

Schreier, M. (2014) Qualitative content analysis. In: Flick, U. (ed) *The Sage Handbook of Qualitative Data Analysis*, pp. 170-183. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Scott, G. (2003) Effective change management in higher education. *EDUCAUSE Review*, November-December: 64-80.

Scott, P. (2011) Leadership in universities. *International Journal of Leadership in Public Services*, 7(3): 229-234.

Searle, J. R. (1975) Indirect speech acts. In: Cole, P., and Morgan, J. (eds) *Syntax and Semantics: Speech Acts*. Vol. 3, pp. 59-82. New York: Free Press.

Searle, J.R. (1995) *The Construction of Social Reality*. New York: The Free Press.

Seawright, J., and Gerring, J. (2008) Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, 61(2): 294-308.

Seeber, M., Lepori, B., Montauti, M., Enders, J., De Boer, H., Weyer, E., Bleiklie, I., Hope, K., Michelsen, S., Nyhagen Mathisen, G., Frølich, N., Scordato, L., Stensaker, B., Waagene, E., Dragsic, C., Kretek, P., Krücken, G., Magalhães, A., Ribeiro, F.M., Sousa, S., Veiga, A., Santiago, R., Marini, G., and Reale, E. (2015) European universities as complete organizations? Understanding identity, hierarchy and rationality in public organizations. *Public Management Review*, 17(10): 1444-1474.

Senge, P.M. (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday.

Senge, P. M. (1998) The practice of innovation. *Leader to Leader*, 9: 16-22.

Senior, B. (2002) *Organizational Change*. 2nd ed. London: Prentice Hall.

Shanker, M. (2015) Organizational climate an antecedent to organizational commitment: An empirical study. *Aweshkar Research Journal*, 19(1): 81.94.

Shaw, P. (1997) Intervening in the shadow systems of organizations. Consulting from a complexity perspective. *Journal of Organizational Change Management*, 10(3): 235-250.

Shields, R. (2013) Globalization and international student mobility: A network analysis. *Comparative Education Review*, 57(4): 609-636.

Shirley, R.C. (1983) Identifying the levels of strategy for a college or university. *Long Range Planning*, 16(3): 92-98.

Siggelkow, N. (2007) Persuasion with case studies. *Academy of Management Journal*, 50(1): 20-24.

Silver, H. (2003) Does a university have a culture? *Studies in Higher Education*, 28(2): 157-169.

Singh, S., and Wassenaar, D. (2016) Contextualising the role of the gatekeeper in social science research. *The South African Journal of Bioethics & Law*, 9(1): 42-46.

Slater, S.F., and Narver, J.C. (1995) Market orientation and the learning organization. *Journal of Marketing*, 59(3): 63-74.

Sminia, H., and Van Nistelrooij, A. (2006) Strategic management and organizational development: Planned change in a public sector organization. *Journal of Change Management*, 6(1): 99-113.

Smith, B.D. (2011) *A Case Study of Organizational Change: College Restructuring in Responses to Mandated Department Eliminations*. Doctoral dissertation, University of Nevada, Las Vegas. Available at: https://digitalscholarship.unlv.edu/thesesdissertations/1250/ (Accessed 20 February 2018).

Smith, B.D., and Martinez, M. (2015) Examining higher education department eliminations through the lens of organizational change. *Journal of Psychological Issues in Organizational Culture*, 5(4): 73-87.

Smollan, R.K. (2006) Minds, hearts, and deeds: Cognitive, affective, and behavioral responses to change. *Journal of Change Management*, 6(2): 143-158.

Soparnot, R. (2011) The concept of organizational change capacity. *Journal of Organizational Change Management*, 24(5): 640-661.

Sousa, D. (2014) Validation in qualitative research: General aspects of specificities of the descriptive phenomenological method. *Qualitative Research in Psychology*, 11(2): 21-227.

Spangenberg, H., and Theron, C. (2013) A critical review of the Burke-Litwin model of leadership, change and performance. *Management Dynamics*, 22(2): 29-48.

Spencer, L., Ritchie, J., Ormston, R., O'Connor, W., and Barnard, M. (2014) In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 269-293. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Stake, R.E. (1995) *The Art of case Study Research*. London: Sage Publications.

Stanford, N. (2015) *The Economist Guide to Organization Design: Creating High-Performing and Adaptable Enterprises*. 2nd ed. London: The Economist in Association with Profile Books Ltd.

Stasey, R. (1996) Management and science of complexity: If organizational life is nonlinear, can business strategies prevail? *Research technology Management*, 39(3): 8-10.

Stensaker, B. (2015) Organizational identity as a concept for understanding university dynamics. *Higher Education*, 69: 103-115.

Stoltenkamp, J., Van de Heyde, V., and Siebrits, A. (2017) The third space professional: A reflective case study on maintaining relationships within a complex higher education institution. *Reflective Practice: International and Multidisciplinary Perspectives*, 18(1): 14-22.

Summerville, M.W. (2005) Uncomfortable convergence: Questions we may dare to ask. *Advances in Developing Human Resources*, 7(3): 293-302.

Svyantek, D.J., and Brown, L.L. (2000) A complex-systems approach to organizations. *Current Directions in Psychological Science*, 9(2): 69-74.

Taylor, J. (2006) "Big is Beautiful". Organizational change in universities in the United Kingdom: New models of institutional management and the changing role of academic staff. *Higher Education in Europe*, 31(3): 251-273.

Tellis, W. M. (1997) Application of a case study methodology. *The Qualitative Report*, 3(3): 1-19. Available at: http://nsuworks.nova.edu/cgi/viewcontent.cgi?article=2015&context=tqr (Accessed 16 December2017).

Thomas, J.B., Shankster, L., and Mathieu, J. (1994) Antecedents to organizational issue interpretation: The role of single-level, cross-level and content-cues. *Academy of Management Journal*, 37: 1252-1284.

Thomson, D., Bzdel, L., Golden-Biddel, K., Reay, T., and Estabrooks, C.A. (2005) Central questions of anonymization: A case study of secondary use of qualitative data (33 paragraphs). *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6(1), Art. 29. Available at: http://www.qualitative-research.net/index.php/fqs/article/view/511/1102 (Accessed 6 August 2019).

Thomson, S.B. (2011) Qualitative research: Validity. *The Journal of Administration & Governance (JOAAG)*, 6(1): 77-82. Available at: http://joaag.com/uploads/6_1_-7_Research_Method_Thomson.pdf (Accessed 21 December 2017).

Tierney, P. (1999) Work relations as a precursor to a psychological climate for change: The role of work group supervisors and peers. *Journal of Organizational Change Management*, 12(2): 120-133.

Tierney, W.G. (2008) *The Impact of Culture on Organizational Decision-Making: Theory and Practice in Higher Education*. Sterling, Virginia: Stylus Publishing.

Tierney, W.G., and Lanford, M. (2015) An investigation of the impact of international branch campuses on organizational culture. *Higher Education*, 70: 283-298.

Tierney, W.G., and Lanford, M. (2016) Conceptualizing innovation in higher education. In: Paulsen, M.B. (ed) *Higher Education: Handbook of Theory and Research*. V. 31, pp. 1-40. Dordrecht: Springer.

Tierney, W.G., and Lanford, M. (2018) Institutional culture in higher education. In: Shin, J.C., and Teixeira, P. (eds) *Encyclopedia of International Higher Education Systems and Institutions*, pp. 1-9. Dordrecht: Springer. Available at: http://springer.iq-technikum.de/content/pdf/10.1007%2F978-94-017-9553-1_544-1.pdf (Accessed 14 June 2019).

Tight, M. (2010) The Golden Age of academe: Myth or memory? *British Journal of Educational Studies*, 58(1): 105-116.

Toma, J.D. (1997) Alternative enquiry paradigms, faculty cultures, and the definition of academic life. *Journal of Higher Education*, 68(6): 679-705.

Toma, J.D. (2010) *Strategic Management in Higher Education: Building Organizational Capacity*. Baltimore: The Johns Hopkins University Press.

Toma, J.D., Dubrow, G., and Hartley, M. (2005) The uses of institutional culture: Strengthening identification and building brand equity in higher education. *ASHE Higher Education Report*, vol. 31, no.3. San Francisco: Jossey-Bass.

Torraco, R.J. (2005) Organization development: A question of fit for universities. *Advances in Developing Human Resources*, 7(3): 303-310.

Torraco, R.J., Hoover, R.E., and Knippelmeyer, S.A. (2005) Organization development and change in universities. In: Morris, M.L. & Nafukho, F.M. (eds) *Proceedings of the Academy of Human Resource Development Research Conference*, pp. 858-865. Bowling Green, OH: AHRD.

Tosey, P., and Robinson, G. (2002) When change is no longer enough: What do we mean by "transformation" in organizational change work? *The TQM Magazine*, 14(2): 100-109.

Trowler, P. R. (1998) *Academics Responding to Change: New Higher Education Frameworks and Academic Cultures*. Buckingham: SRHE & Open University Press.

Vaismoradi, M., Jones, J., Turunen, H., and Snelgrove, S. (2016) Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice*, 6(5): 100-110.

Van Assen, M., Van den Berg, G., and Pietersma, P. (2009) *Key Management Models: The 60+ Models Every Manager Needs to Know*. 2nd ed. Edinburgh Gate: Pearson Education.

Van de Ven, A.H., and Poole, M.S. (1995) Explaining development and change in organizations. *The Academy of Management Review*, 20(3): 510-540.

Van de Ven, A.H., and Poole, M.S. (2005) Alternative approaches for studying organizational change. *Organization Studies*, 26(9): 1377-1404.

Van der Voet, J., Kuipers, B.S., and Groeneveld, S. (2016) A change management perspective. In: Van de Walle, S., and Groeneveld, S. (eds) *Theory and Practice of Public Sector Reform*, pp. 79-99. London: Routledge.

Van Petegem, W., and Kamensky H. (2009*) Education for Innovation: Implementing Advanced Teaching and Learning Methodology at the Southern Federal University. Manual for the Implementation of the Guided Independent Learning*. Rostov-on-Don: Southern Federal University Publishing. (In Russian).

Van Poeck, K., Læssøe, J., and Block, T. (2017) An exploration of sustainability change agents as facilitators of nonformal learning: Mapping a moving and intertwined landscape. Ecology and Society, 22(2): 33, pp.1-12. Available at: https://doi.org/10.5751/ES-09308-220233 (Accessed 6 November 2017).

Van Vught, F. (1997) Using policy analysis for strategic choices. In: Peterson, M.W., Dill, D.D., and Mets, L.A. (eds) *Planning and Management for a Changing Environment: A Handbook on Restructuring Postsecondary Institutions*, pp. 382-402. San Francisco: Jossey-Bass.

Veles, N., Carter, M.-A., and Boon, H. (2019) Complex collaboration champions: University *third space professionals* working together across borders. *Perspectives: Policies and Practice in Higher Education*, 23(2-3): 75-85.

Verbeke, W., Volgering, M., and Hessels, M. (1998) *Journal of Management Studies*, 35(3): 303-329.

Vollman, T. (1996) *The Transformation Imperative*. Boston, MA: Harvard Business School Press.

Wang, S., Avagyan, M., and Skardal, P.S. (2017) Evolving network structure of academic institutions. *Applied Network Science*, 2(1): 1-13.

Watt, D. (2007) On becoming a qualitative researcher: The value of reflexivity. *The Qualitative Report*, 12(1): 82-101.

Watzlawick, P., Weakland, J.H., and Fisch, R. (1974) *Change: Principles of Problem Formation and Problem Resolution*. New York: Norton.

Weber, L. E. (2002) Universities' responsiveness and responsibilities in an age of heightened competition. In: Hirsch, W.Z., and Weber, L.E. (eds) *As the Walls of Academia are Tumbling Down*, pp. 61-72. London/Paris/Genève: Economica.

Webster, S., Lewis, J., and Brown, A. (2014) Ethical considerations in qualitative research. In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 77-110. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Weick, K. E. (1976) Education organizations as loosely coupled systems. *Administrative Science Quarterly*, 21(1): 1-19.

Weick, K. E. (1984) Small wins: Redefining the scale of social problems. *American Psychologist*, 39(1): 40-49.

Weick, K.E. (2001*) Making Sense of the Organization*. Malden, MA: Blackwell.

Weick, K.E., and Quinn, R.E. (1999) Organizational change and development. *Annual Review of Psychology*, 50(1): 361-386.

Weiner, B.J. (2009) A theory of organizational readiness for change. *Implementation Science*, 4(67): 1-9.

Weisbord, M.R. (1976) Organizational diagnosis: Six places to look for trouble with or without a theory. *Group and Organization Studies*, 1: 430-447.

Welsh, J. F., and Metcalf, J. (2003) Faculty and administrative support for institutional effectiveness activities: A bridge across the chasm? *Journal of Higher Education*, 74(4): 445-468.

Wheatley, M.J. (1999) *Leadership and the New Science: Discovering Order in a Chaotic World*. 2nd ed. San Francisco: Berrett-Koehler.

Whelan-Berry, K.S., Gordon, J.R., and Hinings, C.R.B. (2003) Strengthening organizational change processes: Recommendations and implications from a multilevel analysis. *The Journal of Applied Behavioral Science*, 39(2): 186-207.

Whitchurch, C. (2008) Shifting identities and blurring boundaries: The emergence of *third space* professionals in UK higher education. *Higher Education Quarterly*, 62(4): 377-396.

Whitchurch, C. (2012) *Reconstructing Identities in Higher Education: The Rise of 'Third Space' Professionals.* New York: Taylor & Francis.

Whitchurch, C. (2015) The rise of third space professionals: Paradoxes and dilemmas. In: Teichler, U., and Cummings, W.K. (eds) *Forming, Recruiting and Managing the Academic Profession*, pp. 79-99. Dordrecht: Springer.

Whitchurch, C., and Gordon, G. (2010) Diversifying academic and professional identities in higher education: Some management challenges. *Tertiary Education and Management*, 16(2): 129-144.

Whitchurch, C., Locke W., and Marini, G. (2019) *A Delicate Balance: Optimising Individual Aspirations and Institutional Missions in Higher Education*. Centre for Global Higher Education working paper series, Working paper No. 45. Available at: https://www.researchcghe.org/perch/resources/publications/to-publish-wp45.pdf (Accessed 23 May 2019).

Wilkinson, A.M. (1991) *The Scientist's Handbook for Writing Papers and Dissertations*. Englewood Cliffs, N.J.: Prentice Hall.

Williams, J.J. (2006) The post-welfare state university. *American Literary History*, 18(1): 190-216.

Willmott, H. (1995) Managing the academics: commodification and control in the development of university education in the UK. *Human Relations*, 48(9): 993-1027.

Wilson, D.C. (1992) *A Strategy of Change*. London: Routledge.

Winter, R. (1995) The University of Life plc: the 'industrialization' of higher education? In: Smyth, J. (ed) *Academic Work: The Changing Labour Process in Higher Education*, pp. 129-143. Buckingham: Open University Press.

Witherspoon, R., and White, R.P. (1997) *Four Essential Ways That Coaching Can Help Executives*. Greensboro, NC: Center for Creative Leadership.

Witherspoon, R., and White, R.P. (1998) *Four Essential Ways to Coach Executives: A Progress Report and Reflections on Our Practice*. Available at:

http://www.simpsonexecutivecoaching.com/pdf/ceo/4-essential-ways-coach-executives-witherspoon-white.pdf (Accessed 8 December 2018).

Yeo, A., Legard, R., Keegan, J., Ward, K., McNaughton Nicholls, C., and Lewis, J. (2014) In-depth interviews. In: Ritchie, J., Lewis, J., McNaughton Nicholls, C., and Ormston, R. (eds) *Qualitative Research Practice: A Guide for Social Science Students & Researchers*. 2nd ed., pp. 177-210. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Yi, S., Stieglitz, N., and Knudsen, T. (2018) Differentiation and integration in organizational learning: A garbage can model. In: John, J., Baumann, O., Burton, R., and Srikanth, K. (eds) *Organization Design (Advances in Strategic Management)*. V. 40, pp. 177-204. Bingley, UK: Emerald Publishing Limited.

Yin, R.K. (1981) The case study crisis: Some answers. *Administrative Science Quarterly*, 26: 58-65.

Yin, R.K. (2003) *Case Study Research: Design and Methods*. 3rd ed., vol. 5. Thousand Oaks, CA: Sage Publications.

Yin, R.K. (2009) How to do better case studies: (With illustrations from 20 exemplary case studies). In: Bickman, L., and Rog, D.J. (eds) *The SAGE Handbook of Applied Social Research Method.* 2nd ed., pp. 254-282. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Yin, R.K. (2014*) Case study Research: Design and Methods*. Los Angeles/London/New Delhi/Singapore/Washington DC: Sage Publications.

Ylijoki, O.-H. (2005) Academic nostalgia: A narrative approach to academic work. *Human Relations*, 58(5): 555-576.

Ylijoki, O.-H., and Ursin, J. (2013) The construction of academic identity in the changes of Finnish higher education. *Studies in Higher Education*, 38(8): 1135-1149.

Zahir, A. (2010) Third space professionals as policy actors. *Zeitschrift für Hochschulentwicklung (ZFHE)*, 5(4): 46-62.

Zaltman, G., Kotler, P., and Kaufman, I. (1972) *Creating Social Change*. New York: Holt, Reinhadt, & Winston.

Zheng, W., Yang, B., and McLean, G.N. (2010) Linking organizational culture, structure, strategy and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7): 763-771.

Zuidhof, P.W. (2015) Towards a post-neoliberal university: Protest and complicity. *Krisis: Journal for Contemporary Philosophy*, 34(2): 49-55.

Documents and websites

COBRA. Quality Assurance at KU Leuven. Quality Assurance Portal KU Leuven. Available at: https://www.kuleuven.be/english/education/quality/cobra-english (Accessed 18 August 2017).

Coimbra Group Universities. Available at: https://www.coimbra-group.eu/ (Accessed 16 July 2017).

Focus KU Leuven (2015-2016). Available at: http://www.kuleuven.be/about/communicatie/marketing/publicaties/infocus-uk.pdf (Assessed 8 February 2017).

IMEC Beats Silicon PV with 27.1 Procent Perovskite-Silikon Tandem. Press release, July 24, 2018. Available at: https://www.imec-int.com/en/articles/imec-beats-silicon-pv-with-27-1-percent-perovskite-silicon-tandem (Accessed 25 July 2018).

Kritische reflectie (2016) Onderwijs KU Leuven.

KU Leuven – Inspiring the outstanding. Available at: https://www.kuleuven.be/english / (Accessed 26 March 2016).

KU Leuven Research & Development: A Long Tradition of Fostering Innovation and High-Tech Entrepreneurship. LRD Brochure (2017). Available at: https://lrd.kuleuven.be/doc/lrd-brochure-2017 (Accessed 16 April 2017).

League of European Research Universities (LERU). Available at: https://www.leru.org/ (Accessed 6 April 2017).

Leuven Community for Innovation driven Entrepreneurship (Lcie). Available at: http://lcie.be/en/ (Accessed 30 June 2017).

On crossroads, for a sustainable society. Strategic Plan for KU Leuven in 5 projects. April 2018. Available at: https://www.kuleuven.be/english/about-kuleuven/strategic-plan (Accessed 16 May 2018).

QS *World University Rankings 2019*. Available at: https://www.topuniversities.com/university-rankings/world-university-rankings/2019 (Accessed 26 May 2018).

Reuters (2018) *Europe's Most Innovative Universities – 2018*. Available at: https://www.reuters.com/article/us-emea-reuters-ranking-innovative-unive/reuters-top-100-europes-most-innovative-universities-2018-idUSKBN1HW0B4 (Accessed 26 May 2018)

Self-evaluation Report, Faculty of Engineering Science KU Leuven (2015). Faculty of Engineering Science, KU Leuven.

Smart Hub Flemish Brabant. Available at: https://www.smarthubvlaamsbrabant.be/international/ (Accessed 2 June 2018).

Times Higher Education World University Rankings 2019. Available at: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/stat (Accessed 24 May 2018)

Audiovisual materials about Lcie

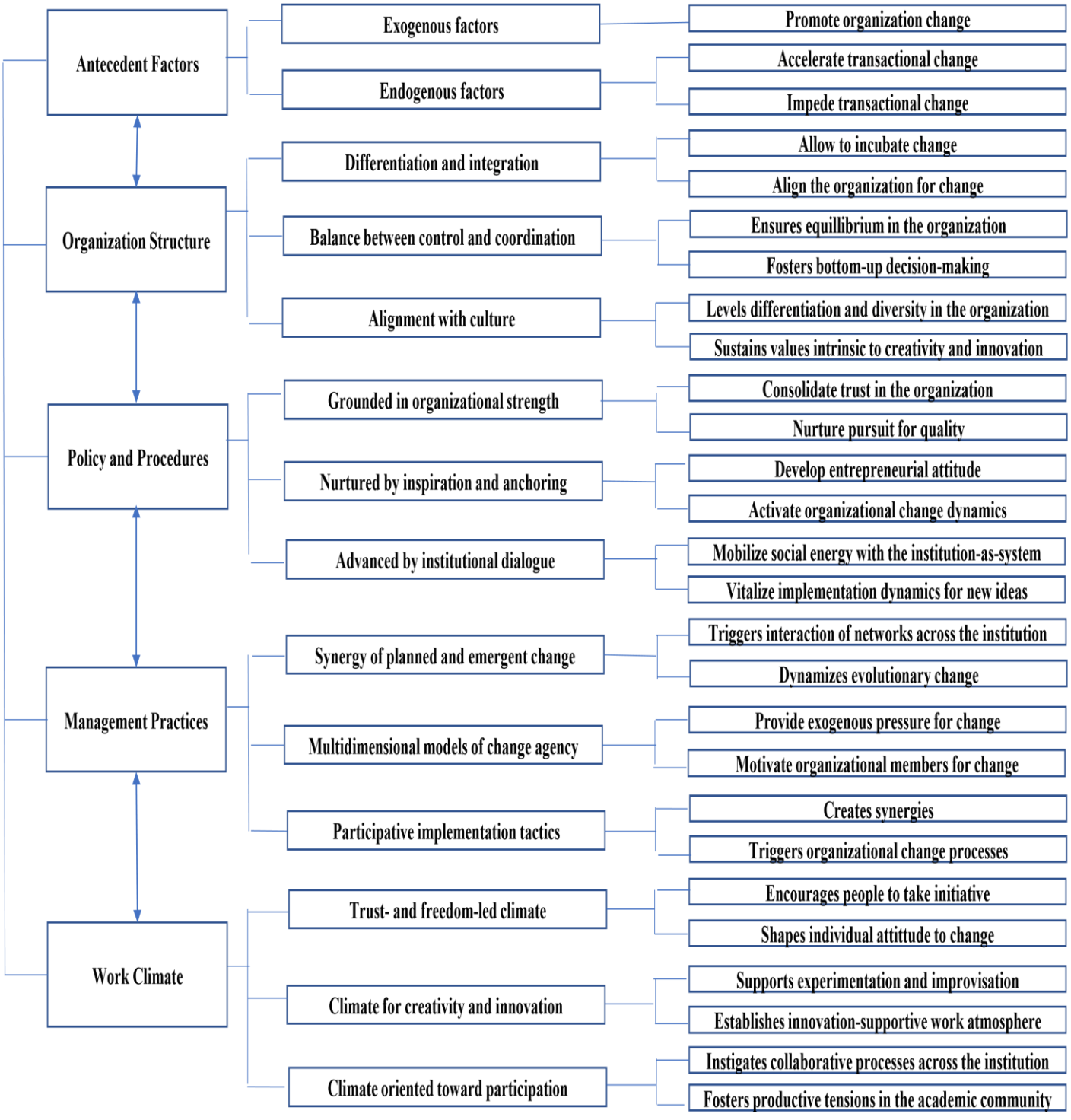
https://www.dropbox.com/sh/pqzc0u3yshzc83l/AAD5T2WBVlB-_t0dpIOd3Psfa/volledige_film_LCIE_opening?dl=0&preview=20%EF%80%A210%EF%80%A22014.mov&subfolder_nav_tracking=1

https://www.dropbox.com/sh/7ogcuiit4hzk6bk/AACyQyI8_Jk5IadJ_hL5c05xa?dl=0

https://www.dropbox.com/sh/30gvwcs84p50yre/AABBJkVBpYOpIRxVoBCjUx1Za?dl=0&preview=Promo+video+updated+LCIE+logo.mov

https://www.dropbox.com/sh/mv0835ql99dn7ol/AAA8wco3F83HI635sD6NKXYTa?dl=0&preview=Designosource+-+Making+Of+Lcie.mp4

Appendix 1: A diagram of relationships between themes and components



Appendix 2: Identity and mission of KU Leuven

KU Leuven is an autonomous university. It was founded in 1425. It was born of and has grown within the Catholic tradition. From its Christian view of the world and the human, KU Leuven endeavors to be a place for open discussion of social, philosophical and ethical issues and a critical center of reflection in and for the Catholic community.

KU Leuven offers its students an academic education based on high-level research, with the aim of preparing them to assume their social responsibilities.

KU Leuven is a research-intensive, internationally oriented university that carries out both fundamental and applied research. It is strongly inter- and multidisciplinary in focus and strives for international excellence. To this end, KU Leuven works together actively with its research partners at home and abroad.

KU Leuven encourages personal initiative and critical reflection in a culture of idea exchange, cooperation, solidarity and academic freedom. It pursues a proactive diversity policy for its students and staff.

KU Leuven aims to actively participate in public and cultural debate and in the advancement of a knowledge-based society. It puts its expertise to the service of society, with particular consideration for its most vulnerable members.
From a basis of social responsibility and scientific expertise, KU Leuven provides high-quality, comprehensive health care, including specialised tertiary care, in its University Hospitals. In doing so it strives toward optimum accessibility and respect for all patients.

KU Leuven carries out its academic activities at various campuses, research parks and hospital facilities in close cooperation with the members of the KU Leuven Association and with its hospital partners.

Leuven, 3 April 2012

Appendix 3: Statutory regulations of KU Leuven

Information for: externals, KU Leuven staff, students
Contact: Bruno Lambrecht

This is an unofficial translation of the Dutch original. Only the Dutch version is legally binding and can be used to define which authorized body can engage the university in specific circumstances.

Endorsed by the Board of Trustees on July 10, 2012 and published in the Belgian Official Gazette of July 24, 2012.
Modified by the Board of Trustees on December 20, 2012 and published in the annexes of the Belgian Official Gazette on January 25, 2013.
Modified by the Board of Trustees on December 21, 2017 and published in the annexes of the Belgian Official Gazette on February 5, 2018.

Preamble

A. Mission and Articles of Association

The Catholic University of Leuven (Katholieke Universiteit te Leuven), the continuation of the studium generale founded on December 9, 1425 by Pope Martin V, recognised as legal entity by law on August 12, 1911 and endorsed by law on May 28, 1970 (henceforth referred to as KU Leuven) fulfils its mission as an independent institution for academic education,

scientific research, services to the community and knowledge transfer activities to the community, as stipulated in its Identity and Mission Statement.

B. KU Leuven Subdivisions

KU Leuven is subdivided into three units: the University, fulfilling academic duties, KU Leuven University Hospitals (henceforth referred to as Leuven University Hospitals), fulfilling clinical duties, and KU Leuven Research and Development (henceforth referred to as LRD), which performs the valorisation duties intrinsic to its public mission.

The University encompasses various sections, namely Groups, Faculties, Departments and other Subdivisions for academic education, scientific research, services to the community and knowledge transfer activities organised on its own campuses and the Partner University College campuses.

Leuven University Hospitals encompass medical and support services, nursing departments, as well as the patient care competency/activity centres.

LRD consists of Central Management, a number of Divisions and Project Groups.

C. Z.org KU Leuven

The Board of Governors conferred the organization, operation and management of its psychiatric services to the hospital association Universitair Psychiatrisch Centrum KU Leuven, operated by the not for profit association Z.org KU Leuven. For the application of these statutory regulations, members of the academic staff who are also attached to the not for profit association Z.org KU Leuven enjoy the same rights and duties as members of the academic staff who are also attached to UZ Leuven.

D. KU Leuven Community

KU Leuven community encompasses all enrolled students, the academic, administrative and technical staff of the University and LRD as well as the staff of the Leuven University Hospitals and Z.org KU Leuven.

Without prejudice to provisions applicable by law, act or regulation, the Board of Governors establishes the status of KU Leuven Community members.

E. Board of Trustees and KU Leuven Management Bodies

The Board of Trustees is KU Leuven’s constituting authority.

The University’s Management Bodies are:

- the Board of Governors; the Academic Council; the Special Academic Council; the Joint Executive Board; the Rector; the Managing Director; the Group Executive Committee and the Special Group Executive Committee;
- the Management Bodies of Faculties and Departments;
- the Kulak Management Bodies as well as the Management Bodies and Executive Positions responsible for KU Leuven’s programmes at Partner University College campuses.

The Leuven University Hospitals' Management Bodies are:

- the Board of Governors, the Leuven University Hospitals Executive Board, the Leuven University Hospitals Executive Director and the Leuven University Hospitals Management Committee.

The LRD Management Bodies are:

- the Board of Governors, the LRD Executive Board, the LRD Executive Director and the LRD Management Committee.

F. Headquarters

KU Leuven has its administrative headquarters at 3000 Leuven, Oude Markt 13.

G. Relations with other Institutions

Relations between KU Leuven and the 'Katholieke Universiteit te Leuven - Université catholique de Louvain' are regulated by the latter institution's articles of association and through mutual agreements.

Under the agreement to found an association grouping higher education institutions around KU Leuven, signed on July 10, 2002, KU Leuven is itself a member of KU Leuven Association vzw (non-profit association).

KU Leuven is also a member of the General Assembly of the higher education institutions serving on the KU Leuven Board of Trustees as laid down in Article 15.2.

Chapter I. Global Functioning Principles

0. Definitions

0.1. 'KU Leuven Association': KU Leuven Association vzw, with enterprise number 0478.655.012.

0.2. 'Partner University Colleges': the higher education institutions serving on the KU Leuven Board of Trustees as laid down in Article15.2.

0.3. 'Partner University College': one of the Partner University Colleges.

Article 1 Representational Authority and Power of Representation

1.1. Representational Authority

The Rector represents KU Leuven and its community both internally and externally.

1.2. Delegation of Statutory Power of Representation, both Judicially and Extrajudicially, to Individual Members of the Board of Governors

Judicially and extrajudicially, KU Leuven is statutorily represented by the Rector and/or Managing Director - delegated to do so on the Magagement Board's statutory power of

representation, of which they become members by virtue of their office. Said body, by virtue of Article 3 of the Law of August 12, 1911, represents KU Leuven vis-à-vis third parties. Replacement of the Rector for legal proceedings in case of death, illness, absence, or any other instance of inability to act is stipulated in the delegation of signing authority regulations as drawn up by a notary public.

For all matters involving the Leuven University Hospitals, KU Leuven will be statutorily represented, both judicially and extrajudicially, by the Chair of the Leuven University Hospitals Executive Board and/or the Leuven University Hospitals General Manager - delegated to do so under the Management Board's statutory representational authority - , of which they become members by virtue of their office. Said body, by virtue of Article 3 of the Law of August 12, 1911, represents KU Leuven vis-à-vis third parties.

For all matters involving LRD, KU Leuven will be statutorily represented, both judicially and extrajudicially, by the Chair of the LRD Executive Board and/or the LRD General Manager - delegated to do so under the Magagement Board's statutory representational authority - , of which they become members by virtue of their office. Said body, by virtue of Article 3 of the Law of August 12, 1911, represents KU Leuven vis-à-vis third parties.

1.3. Delegation of signing authority to other members of the KU Leuven Community

The Board of Governors may grant delegation of signing authority to members of the KU Leuven community, with the exception of the competences described in Articles 21, 22, 23, 24, 26, 27, 30, 31, 32 and 34. In view of this, the Board of Governors will compile a limitative list of authorised representatives, stating the exact scope and duration of their delegation of signing authority. Said list will be made public.

Article 2 Procedure for Advisory Services

2.1. Term for Advice

When, in accordance with these statutory regulations, the Board of Trustees or a Management Body seek advice before reaching a decision, the reasonable term within which this advice must be obtained will be stipulated in the call for advice. If said advice is not given within the stipulated term, the Board of Trustees or Management Body will decide without this advice.

2.2. Clarification of the Advice by the Chairs of the Advising Body

The Chair of the advising Management Body will clarify said advice during the relevant meeting.

2.3. Dissolution of the Obligation to Seek Advice on the Advising Body's Own Initiative

When a Management Body with advisory responsibilities acts on its own initiative and draws up decision proposals, the obligation to seek advice is dissolved. Proposed suggestions will be treated as sought advice, as laid down in Article 2.2.

Article 3 Rules Governing the Decision-Making Process at Meetings of the Board of Trustees and Management Bodies

3.1. Drawing up the Agenda and Calling Meetings

The Chair of the Board of Trustees or a Management Body draws up the agenda and calls the meeting. Without prejudice to the authorities of other individuals authorised to do so in accordance with these statutory regulations, three members of the Board of Trustees or a Management Body (in an advisory capacity or not) acting together, may have items added to the agenda of the next meeting of the Board of Trustees or the Management Body or have a extraordinary meeting called.

3.2. Circulation of the Agenda

Except for high priority cases, meetings of the Board of Trustees and all Management Bodies are called in writing and will state the agenda. Members receive an invitation to attend minimum five days prior to the meeting, together with all the necessary documents. Unless otherwise stipulated in these statutory regulations the Board of Trustees and said Management Bodies can only reach valid decisions on items that are not on the agenda provided two thirds of all attending members with voting rights agree to discuss the matter.

3.3. Conflict of Interest

Members of the Board of Trustees or a Management Body are not allowed to take part in decisions, give advice on, submit proposals for or take part in deliberations/decisions in which the members themselves or relatives by blood or marriage, to the third degree inclusive, or spouses of these relatives have a direct and personal interest. For the application of this clause, cohabitees are considered equivalent to relatives in the first degree or spouses .

3.4. Delegation of Signing Authority

Members of a Management Body may hold maximum one power of representation, unless stipulated otherwise.

3.5. Attendance Quorum

Subject to any more severe provisions to the contrary contained in these statutory regulations, the majority of members of the Board of Trustees and individual Management Bodies must attend or be represented to reach a valid decision. Without quorum, the Chair will call another meeting minimum one week and maximum three weeks after the initial meeting. Decisions reached at this second meeting will be valid, regardless of attendance.

3.6. Long-Distance Meeting via Electronic Means of Communication

When explicitly stipulated in the call for a meeting, eligible members of a Management Body have the right to attend via electronic means of communication. Said electronic means of communication must enable all eligible members to acquaint themselves directly, simultaneously and uninterruptedly with what discussions are held during the meeting, vote on all agenda items needing decision, as well as take part in deliberations and exercise their right of interpellation. Any eligible member attending the Management Body meeting long-distance will be considered equal to physically attending members.

3.7. Majority Quorum

Subject to any more severe provisions to the contrary contained in these statutory regulations, decisions are taken by declared simple majority of attending or represented members. In case of a tie, decisions are null and void.

3.8. Secret Ballot

Individual members with voting rights may request a secret ballot. All elections and ballots about individuals are secret. A secret ballot will be reported in the final decision.

3.9. Access to Agenda and Minutes

Each Management Body approves a set of regulations determining which meeting documents may be viewed by non-members of the relevant Management Bodies. The delegating body may request documents at all times.

Members of the Board of Trustees wishing to do so, may view the Board of Governors' documents.

3.10. Government Representatives

Under the authorities granted to them by act, the Flemish Government Commissioner and the deputy Minister of the Budget have the right to attend all meetings of Management Bodies listed in these regulations in an advisory capacity, and to request all documents they do not receive by operation of law.

3.11. Written Procedure

In exceptional circumstances, the Chair of a Management Body may decide to organise a written consent procedure over a specific agenda item. This procedure is not followed in case a secret ballot is needed, when advice is sought or decisions are made about these statutory regulations as well as the Identity and Mission Statement. If one or more members of the Management Body disagree with a proposal to solve an acute problem, the item will be put on the agenda of the proximate meeting.

Article 4 Rules Regarding Appointment, Evaluation and Dismissal

4.1. Nominations

Each member of a Management Body with voting rights may nominate candidates for appointment or election in said Management Body, unless otherwise stipulated in these statutory regulations.

4.2. Compulsory Assessment Preceding First Appointment to a Non-Elected Executive Position

Unless otherwise stipulated in the Internal Regulations, non-elected individuals taking up an executive position for the first time will be assessed externally, without prejudice to the Rector's right to nominate candidates him/herself, in accordance with Article 27. The purpose of such an assessment is to guarantee optimal staffing for such a position. External assessment is organised by the body nominating the candidates in consultation with the elected Rector.

External assessment of Joint Executive Board Members will be organised by the Board of Governors.

4.3. Evaluation

4.3.1. Unless otherwise stipulated in these statutory regulations, the Board of Trustees or the Management Body qualified to appoint an individual is also qualified to initiate an evaluation, if called for in these regulations or when deemed desirable.

4.3.2. The five-yearly evaluation of Joint Executive Board Members as senior academic staff members (imposed by act) is done by external members of the Board of Governors. The same applies to the proximate evaluation of former Joint Executive Board Members. Members of the Group Executive Committees or individuals who – commissioned to do so by KU Leuven management - primarily occupy an executive position as stipulated by the Board of Governors, will be evaluated by the Vice Rectors inside the Joint Executive Board.

4.4. Body Qualified to Dismiss from Office

Unless otherwise stipulated in these regulations, the Board of Trustees or Management Bodies qualified to appoint individuals for positions or offices listed in these regulations, are also qualified to dismiss them from said positions, upon evaluation and after having heard the individual in question. Bodies can also take disciplinary measures to suspend a fellowship or job holder for a period of maximum three months; where necessary upon evaluation and after having heard the individual in question.

For the authorities listed in this article, the first higher-ranking Management Body acts as internal appeals authority for these staff members.

In case of the Rector, said measures solely apply to the Board of Trustees, after consultation with the University Council.

Article 5 Term of Office

5.1. Term of Office

Unless otherwise stipulated, terms of office are for a period of four years and immediately renewable once.

The offices of Vice Rector and Academic Director are immediately renewable twice.

The offices of Managing Director, Leuven University Hospitals Executive Director and LRD Executive Director have unlimited renewability for successive periods of maximum four years in principle.

Offices for which individuals must be senior academic staff members, junior and associate academic staff members, administrative and technical staff members or students, may only be taken up by individuals who are in a position to exercise their office for the total duration, starting on the day the duty is accepted or, in case of replacement, the remaining current term.

Unless otherwise stipulated in these regulations terms for representing junior and associate academic staff members are for two years and immediately renewable once, while terms for

representing students are for one year and immediately renewable once. For Programme Committees set up by Groups or Faculties, the student representative's office is renewable as long as the latter is enrolled in the programme for which the Programme Committee is qualified.

Offices taken up in a specific capacity end by operation of law when said capacity ends.

In the event of death or dismissal of a fellowship or job holder for which succession has been foreseen, that individual will be replaced by the highest-ranking successor in the interim.

5.2. Starting Date Appointments: August 1

Offices listed in these regulations, with the exception of that of Managing Director, Leuven University Hospitals Executive Director and LRD Executive Director and external members of the Board of Governors, start on August 1 and finish on July 31. Without prejudice to stipulations to the contrary, the term of office starting after the death or dismissal of a predecessor is determined as follows: the period up to the proximate July 31; from the subsequent August 1, the normal term of office.

5.3. Election for Office: in the course of the third month before the expiry of the office at the latest.

Except for replacements that must be effected during a term of office itself and without prejudice to the rules governing Rectorial elections, elections held within the scope of these regulations will be held at the latest in the course of the third month before the current office expires.

Article 6 Delegation

Unless otherwise stipulated, each KU Leuven Management Body may, under its own responsibility, partially delegate its authorities to other Management Bodies or to individuals who are members of other Management Bodies. Such delegation automatically also entails the delegation of power of representation, unless the decision to delegate limits or excludes such authorities.

If these statutory regulations stipulate that a body will delegate its authorities, those authorities must indeed be delegated.

The delegating Management Bodies continue to hold ultimate legal responsibility and authorities and are therefore also allowed to monitor the correct exercise of said delegation.

The delegating Management Bodies will acquaint themselves with decisions made by the delegated Bodies via the agenda and by accessing the relevant Management Bodies' minutes.

Delegating Management Bodies may ask for decisions to be revised within a reasonable period, on the basis of arguments advanced by them. The opposed decision will effectively be suspended. They may also request that specific agenda items be adjourned or added on the agenda and discussed again. In exceptional cases they have power of retrieval.

The delegating Management Body acts as internal appeals authority for decisions contested by the next-level Management Body.

Article 7 Internal Regulations

The Board of Trustees and individual Management Bodies will adopt Internal Regulations of their own.

Chapter II. Board of Trustees

The Board of Trustees checks whether KU Leuven complies with its Identity and Mission Statement and respects the Global Strategic Vision. Through the Board of Governors it monitors KU Leuven's overall functioning The Board of Trustees has a special responsibility vis-à-vis the Faculty of Theology and Religious Studies as well as to the Special Faculty of Canon Law. It bears final responsibility in settling disputes over the exercise of degree-awarding powers granted by act and delegated to the Executive Committees.

Section 1. Authorities

Article 8 Mission Statement, Global Strategic Vision

The Board of Trustees approves KU Leuven's Identity and Mission Statement and its Global Strategic Vision, as well as proposals for amendment made by the Board of Governors as described in Chapter VI of these regulations, having first sought the advice of the University Council and the University Hospitals and LRD Executive Boards, each for matters of their own concern. The Board of Trustees delegates monitoring the correct implementation of the above to the Board of Governors.

The Board of Trustees may change KU Leuven's Identity and Mission Statement and its Global Strategic Vision on its own initiative, having first sought the advice of the Board of Governors, the University Council and the Leuven University Hospitals and LRD Executive Boards, each for matters of their own concern.

Article 9 Statutory Regulations

The Board of Trustees:

i. approves KU Leuven's statutory regulations, as well as proposals for amendment by the Board of Governors, having first sought the advice of the University Council, the Leuven University Hospitals and LRD Executive Boards, each for matters of their own concern;
ii. amends the statutory regulations on its own initiative, having first sought the advice of the Board of Governors, the University Council and the Leuven University Hospitals and LRD Executive Boards, each for matters of their own concern.

Article 10 Appointments

10.1. Appointment and Dismissal of the Rector

The Board of Trustees appoints and dismisses the Rector, who becomes a member of the Board of Governors by virtue of his/her office.

10.2. Appointment of Nominated Candidates

It appoints all other members of the Board of Governors upon nomination by the Board of Governors in accordance with the stipulations in these statutory regulations.

External members of the Board of Governors are appointed upon nomination by the Board of Governors, which first seeks the advice of the University Council. Advice of the Leuven University Hospitals and LRD Executive Boards will be sought for matters of their concern.

The Board of Trustees appoints the Chair of the Board of Governors among the Board of Governors' external members, in consultation with the external Managers and the Rector. By way of derogation from Article 5.1. of these regulations a Chair may be appointed for an immediately renewable period of less than four years, without prejudice to Article 36.2.

It appoints the Chairs of the Leuven University Hospitals and LRD Executive Boards, who by virtue of their office become members of the Board of Governors. Said appointment is done upon nomination by the Board of Governors, having first sought the advice of the Leuven University Hospitals or LRD Executive Board, and in consultation with the Rector.

It appoints the Leuven University Hospitals Executive Director and the LRD Executive Director according to the provisions stipulated in Articles 91 and 100 of these regulations.

Student Board members are appointed for a once renewable period of one year.

If a candidate nominated by the Board of Governors is rejected, the Board of Governors may propose new candidates, as stipulated in the appointment procedure governing the position.

10.3. Appointments in the Absence of Nominated Candidates

If no candidate members are nominated for the Joint Executive Board within forty-five calendar days starting from the Rector's appointment (except for the Rector and the Managing Director), the Board of Trustees, having first heard the Rector, may select and appoint its own candidates.

If no candidate members are nominated for the positions of external member of the Board of Governors, Managing Director, Chair of the Leuven University Hospitals Executive Board, University Hospitals Executive Director, Chair of the LRD Executive Board, and LRD Executive Director within ninety calendar days after the office falls vacant, the Board of Trustees, upon hearing the elected Rector, may select and appoint its own candidates.

Article 11 Board of Governors Membership Profile

The Board of Trustees approves the profile of the members of the Board of Governors, except that of the elected Rector. Approval is proposed by the Board of Governors, having first sought the advice of the University Council and the Leuven University Hospitals and LRD Executive Boards, each for matters of their own concern.

Article 12 Participation in and Formation of other Legal Entities

The Board of Trustees, upon proposal by the Board of Governors and having first sought the advice of the Academic Council, decides on participation in and formation of other legal entities, if doing so may have consequences for KU Leuven's identity.

Article 13 Supervision, Discharge, Conflict Settlement and Binding Arbitration

13.1. Supervision and Discharge

The Board of Trustees assesses the strategic vision and long-term policy devised by KU Leuven on the basis of an annual report compiled by the Board of Governors, and its smooth functioning on the basis of both the balance sheet and the accounts. It gives discharge to members of the Board of Governors and the external auditor on the basis of explanatory statements from the Rector, the Chair of the Board of Governors, the Managing Director, the Leuven University Hospitals Executive Director and the LRD Executive Director, the Chair of Audit Committee and the external auditor.

13.2. Conflict Settlement

13.2.1. If a dispute arises about the way the KU Leuven Management Bodies exercise their authorities on Partner University College campuses, as laid down in Article 76bis and following, the Board of Trustees' co-opted independents Division will propose a decision, after which the Board of Trustees will settle the conflict.

13.2.2. Executive Committees that deem their interests infringed upon, or the KU Leuven Board of Governors, must resort to this settlement procedure to start legal proceedings against the Board of Trustees, after all internal mediation procedures listed below have been exhausted.

13.2.3. In accordance with Article 13.2.2 conflicts must first be mediated by the Academic Director concerned, then by the Joint Executive Board and finally be submitted to the KU Leuven Association Board of Governors. If no solution is found the conflict will be settled by the Board of Trustees by request of the KU Leuven Board of Governors or the Executive Committee concerned.

13.3. Mediation and Binding Arbitration

If a dispute arises over matters in which KU Leuven and one or more of the university colleges of the KU Leuven Assocation vzw, and/or the KU Leuven Association vzw are concerned parties, the members listed in Article 15.3.1. will be asked to propose a decision to the Board of Trustees and/or the General Assemblies concerned.

When formulating their proposal, the members listed in Article 15.3.1. will put the joint interest of KU Leuven, members of KU Leuven Association vzw and the KU Leuven Association first.

If not all university colleges concerned and/or the University and/or the KU Leuven Association vzw agree with the proposed decision, the various parties commit themselves to putting the dispute to a board of arbiters, assembled and deciding in accordance with the stipulations in the Judicial Code.

The ruling of said board of arbiters is definitive and final. It has the status of res judicata for each party concerned in said arbitrage and is enforceable without possibility of redress.

The arbitral board judges fairly.

In case of disputes, the stipulations of this article also apply to HUB-KUBrussel vzw and Patrimonium Hoger Onderwijs Sint-Lukas Brussel vzw.

Article 14 Faculty of Theology and Religious Studies and Special Faculty of Canon Law

The Board of Trustees decides, as laid down in Article 18.1, on the setting up, closure and status of the Faculty of Theology and Religious Studies and of the Special Faculty of Canon Law at the suggestion of the Board of Governors and upon seeking the advice of the Academic Council.

As laid down in Article 18.2, it decides on the proposed decision put forward by the Special Academic Council on the first appointment or permanent appointment of senior academic staff members of the Faculty of Theology and Religious Studies and of the Special Faculty of Canon Law. Decisions listed in the proposals of the Special Academic Council are definitive by operation of law unless the Board of Trustees motivates its reasons for not accepting them within thirty calendar days after receiving said proposals.

Section 2. Composition, Ballot, Distribution of Votes, Chairmanship and Meeting Frequency

Article 15 Composition

The Board of Trustees has Four Divisions:

15.1. KU Leuven Division:

- the Chair of the Board of Governors;
- A number of permanent KU Leuven representatives or their regular alternates, appointed by the Board of Governors in accordance with Article 26 of these regulations.

Said members must not be KU Leuven staff.

The total number of members representing KU Leuven and an equal number of regular substitutes must not be higher than the number of permanent representatives defined in Article 15.2. of these statutory regulations.

Each member representing KU Leuven may be replaced by a permanent alternate or can grant power of representation to a member/regular alternate representing KU Leuven.

The total number of members representing KU Leuven must not be higher than the highest number of permanent representatives as defined in Article 15.2. of these statutory regulations. Members representing KU Leuven get the same number of votes in the Board of Trustees as the members defined in Article 15.2. If need be, the members representing KU Leuven may be given more than one vote. If the number of members representing KU Leuven is smaller than the number of allocated votes, the Board of Governors decides how votes are to be divided among them.

15.2. the Division representing each of the other higher education institutions that are members of KU Leuven Association vzw:

the permanent representative of the institution(s) or his/her regular substitute serving on the General Assembly of KU Leuven Association vzw;

15.3. the Independents Division has two Subdivisions:

15.3.1. the Division of co-opted independents, co-opted in accordance with the articles of KU Leuven Association vzw and in view of their independence, by the representatives of KU Leuven defined in Article 15.1, and the representatives of Partner University Colleges listed in Article 15.2., upon consultation of the diocesan bishops of the Dutch-language region of Belgium defined in Article 15.4.1 as members of the General Assembly of the KU Leuven Association vzw. The number of co-opted members must not be higher than the number of members defined in Article 15.2. If the number of co-opted independents is lower than the number of votes they have been given, said members may be granted more than one vote. If need be, votes will be divided in accordance with the KU Leuven Association vzw's articles of association.

15.3.2. a representative of KU Leuven Association, appointed in accordance with its articles of association, who is in no way concerned in the conflict settlement procedure required by Article 13.2. and the procedure for binding arbitrage required by Article 13.3.

15.4. the Division acting in an advisory capacity has the following Subdivisions:

1. the Archbishop of Mechelen-Brussel, bearing the title of Lord High Chancellor of KU Leuven, and the other diocesan bishops in the Dutch-speaking region of Belgium;
2. the Subdivision of interested civil society members, jointly appointed by the Divisions laid down in Articles 15.1., 15.2. and 15.3.1.;
3. the Rector of KU Leuven.

15.5. Each member may receive an unlimited number of delegations of signing authority from members in the same category. The number of delegations of signing authority is limited to:

- one, in case of decisions over suspension as a disciplinary measure (in particular measures taken in the interest of KU Leuven's smooth functioning) or the dismissal of the Rector and/or Chair of the Board of Governors;
- two, in case of amendments to the statutory regulations or the mission statement or the Global Strategic Vision.

15.6. Secretary

The Director-General of the Rector's Office is the secretary of the Board of Trustees and attends the meetings.

15.7. Term of Office

Members of the Board of Trustees belonging to a KU Leuven Division are appointed for a period of maximum four years. They may occupy maximum three consecutive terms of office. An interval of minimum four years is required before they qualify for a new term of office. By way of derogation from Article 5.1. they are outgoing by operation of law at the end of the calendar year during which they reach the age of 75.

15.8. Composition in case of changes to the General Assembly of KU Leuven Association vzw

If under the agreement of July 10, 2002 to set up an association around KU Leuven, amendments are made to the composition of the General Assembly of KU Leuven Association vzw, the composition of the Board of Trustees will be amended accordingly.

Article 16 Chairmanship of the Board of Trustees and Chairmanship of the Division of Co-opted Independents

16.1. The Chair of the Board of Governors chairs the Board of Trustees.

Whenever the authorities described in Articles 14 and/or 18.2 of these regulations are on the agenda, the Chair of the Board of Trustees will pass chairmanship over relevant item(s) on to the Archbishop of Mechelen-Brussel.

16.2. The Division of co-opted independents defined in Article 15.3.1. appoints a Chair among its members. Said individual acts as Chair whenever this Division meets, in compliance with the procedure required by Articles 13.2 or 13.3. of these regulations.

Article 17 Meeting Frequency and Extraordinary Meetings

17.1. The Board of Trustees meets at least twice a year. Meetings are called by the Chair or by an individual authorized to do so by the Chair.

17.2. The Rector, the Chair of the General Assembly of KU Leuven Association vzw – acting independently – or minimum three members of the Board of Trustees acting together, can have items put on the agenda or request that a extraordinary meeting be called.

Article 18 Attendance Quorum and Majority Quorum

18.1. Decisions may only be taken when at least half the members with voting rights attend or are represented by proxy, and with a declared simple majority of attending and represented members, barring the exceptions listed below.

18.2. Amendments to the Identity and Mission Statement, as required by Article 8 of these regulations, concerning the Christian nature of KU Leuven, can only be discussed if at least two thirds of the members with voting rights and the members of the Division of diocesan bishops from the Dutch-speaking region of Belgium in accordance with Article 15.4.1. attend or are represented by proxy. Said proposed changes must be approved with a majority of votes by the attending and the represented members of the first joint three Divisions. The Subdivision of diocesan bishops from the Dutch-speaking region of Belgium in accordance with Article 15.4.1. may exercise a majority veto.

18.3. For decisions by virtue of Article 14, at least two thirds of the members with voting rights and of Division 15.4.1. must attend or must be represented by proxy. Proposals must be approved with a majority of votes cast by both attending and represented members of the joint first three Divisions, as well as of the Subdivision of diocesan bishops from the Dutch-speaking region of Belgium.

18.4. For decisions regarding proposed amendments to the statutory regulations in accordance with Article 9 of these regulations, suspension as a disciplinary measure for maximum 3 months or dismissal of the Rector, at least two thirds of the members must attend or be represented, and the Chair of the Board of Trustees must attend.

For decisions about suspension as a disciplinary measure for maximum 3 months and about dismissal of the Chair of the Board of Governors, at least two thirds of the members must attend or be represented. The Rector must also attend and be heard.

Decisions must be taken with a majority of at least two thirds of the votes cast by the attending and the represented members.

If not all the above conditions for an attendance quorum are met, a second meeting will be called at the earliest after fifteen calendar days.

This meeting must be held at the latest fifteen days after the second call for a meeting. Regardless of attending numbers/proxies, the assembly may decide on proposed amendments to the statutory regulations or the dismissal of the Rector or the Chair of the Board of Governors with the same majority of votes required for the initial meeting.

Chapter III. Board of Governors

The Board of Governors oversees KU Leuven's activities. It decides on the global strategy and follows up on how it is worked out. It approves the budget and the balance sheet.

Section 1. Authorities

Article 19 General

The Board of Governors oversees KU Leuven's activities. In accordance with the mission statement and the Global Strategic Vision it determines the global strategy and approves partial strategies, whose implementation it stimulates and evaluates. It stimulates and coordinates, fine-tunes and - when necessary - arbitrates between the KU Leuven Management Bodies, with the exception of the procedure listed in Article 13.2.1.. It does so with a view to optimally realising the goals listed in the mission statement and the Global Strategic Vision and the strategic plans.

It prepares the mission statement and the statutory regulations. It represents KU Leuven judicially and extrajudicially vis-à-vis third parties as prescribed by the Law of August 12, 1911, without prejudice to the power of representation of the relevant Management Bodies.

Article 20 Delegation

It delegates to the Academic Council the authorities defined in Article 38 of these regulations, to the Joint Executive Board the governance of the University in accordance with Article 51 of these regulations, to the LRD Executive Board the running of the valorisation activities in accordance with Article 96 of these regulations. The provisions for doing so may be described in detail in a charter.

The management of the Leuven University Hospitals, in accordance with the Law on hospitals and other health care institutions, coordinated on July 10, 2008, is delegated to the Leuven University Hospitals Executive Board, with the exception of appointing the external auditor, for which the Board of Governors serves as governing body. The provisions for doing so may be described in detail in a charter.

The Board of Governors delegates filing claims by law to the Joint Executive Board, the Leuven University Hospitals and the LRD Executive Boards, each for matters of their concern.

Under its responsibility the Board of Governors may delegate its authorities to other Bodies listed in these regulations and members of said Bodies, with the exception of the authorities defined in Articles 21, 22, 23, 24, 26, 27, 30, 31, 32 and 34. and 34.

The Board of Governors decides on the conclusion of cooperation agreements with partner university colleges, in accordance with Article 13.3.

Article 21 Mission Statement, Global Strategic Vision, Strategic Plan, Annual Report

21.1. Amendment

In consultation with the University Council, the Board of Governors may propose for approval to the Board of Trustees amendments of the mission statement, the Global Strategic Vision and the statutory regulations, in accordance with Articles 8 and 9 of these regulations, having first sought the advice of the Leuven University Hospitals and the LRD Executive Boards. It approves the University's staff regulations, having first sought the advice of the Academic Council.

21.2. Implementation

The Board of Governors approves initiatives to implement KU Leuven's mission statement and its Global Strategic Vision. In view of this, it sets out a global strategy and approves the University, the Leuven University Hospitals and LRD partial strategies.

It monitors the implementation of those partial strategies.

It approves KU Leuven's annual report.

Maximum one year after a new Joint Executive Board takes up office, the Board of Governors will bring its global strategy and partial strategies up to date and will update profile descriptions for the members of the Board of Governors, with the exception of the Rector, who is elected.

Article 22 Budget and Accounts

The Board of Governors approves KU Leuven's budgets and annual reports, including the parts defined in the preamble, and monitors KU Leuven's financial equilibrium. Approval of KU Leuven's budgets and of its balance sheet is done on the basis of a report from the KU Leuven Audit Committee, with detailed explanations from the Rector, the Managing Director, the Leuven University Hospitals Executive Director, the LRD Executive Director and KU Leuven's external auditor.

It monitors the efficient and effective functioning of the risk management and control systems.

Article 23 KU Leuven Audit Committee

23.1. Within the Board of Governors one KU Leuven Audit Committee is set up. The KU Leuven Audit Committee consists of external members of the Board of Governors with sufficient expertise in the fields of accounting, audit and risk management. The KU Leuven Audit Committee reports to the Board of Governors. The mode of reporting to the delegated Management Bodies is described in detail in the audit charter, itself approved by the Board of Governors.

Without prejudice to the Board of Governors' duties in accordance with Article 22 – i.e. monitoring KU Leuven's financial equilibrium – the KU Leuven Audit Committee is also assigned the following duties - among possible others:

a. monitoring the financial reporting process;

b. monitoring the efficiency of KU Leuven's internal control and risk management systems;

c. monitoring the internal audit and its efficiency;

d. monitoring the statutory audit of the balance sheet including following up on questions from and recommendations by the external auditor;

e. assessing and monitoring the external auditor's independence, who is responsible for controlling the balance sheet, whilst making sure that this independence is in no way threatened by his/her providing other services to KU Leuven;

f. putting forward the appointment of a KU Leuven external auditor to the Board of Governors, as well as the extension of his/her term of office.

The Chair of the KU Leuven Audit Committee reports minimum once a year to the Board of Trustees and the Board of Governors on the performance of his/her duties when the budget is approved, the balance sheet approved and discharge granted.

The external auditor controlling the balance sheet:

a. annually confirms his/her independence from KU Leuven in writing to the KU Leuven Audit Committee;

b. annually reports to the KU Leuven Audit Committee what other services he/she performs for KU Leuven;

c. confers with the KU Leuven Audit Committee on threats posed to his/her independence and what measures have been taken to limit such threats, as substantiated by him/her.

23.2. To fulfil its duties, the KU Leuven Audit Committee may hear the Management Bodies and their individual members as well as KU Leuven staff members. To perform its task the Board has access to the buildings and to all relevant information. The KU Leuven Audit

Committee describes how it operates in a charter submitted for approval to the Board of Governors.

23.3. The Chair of the KU Leuven Audit Committee is appointed by the Board of Governors. The Chair of the Board of Governors is not on the KU Leuven Audit Committee.

Article 24 Remuneration Committee

Within the Board of Governors a Remuneration Committee will be set up to deal with individual KU Leuven staff files, including those of members of the Board of Governors, the Leuven University Hospitals and LRD Executive Boards, without prejudice to the authorities granted to the Leuven University Hospitals Remuneration and Appointment Committee in Article 87.

Article 25 Managing KU Leuven's Assets – Bequests and Legacies

Without prejudice to the responsibilities delegated to the Leuven University Hospitals Executive Board in Article 85 and the authorities delegated to the LRD Executive Board in Article 96, the Board of Governors decides on all management and executive decisions concerning KU Leuven's assets, and on accepting or rejecting bequests or legacies.

Article 26 Appointment and Dismissal of Permanent and Substitute Representatives of KU Leuven in the Board of Trustees

Having first sought the advice of the University Council, the Leuven University Hospitals and LRD Executive Boards, it assigns KU Leuven's permanent representatives and their potential deputies in the Board of Trustees with a two third majority of members, both attending and represented. It approves their dismissal- both by virtue of their office or at their own request - with the same majority. No prior advice is needed for this.

Article 27 Appointment of Joint Executive Board Members, External Representatives in the Leuven University Hospitals and LRD Executive Boards, Kulak Executive Committee and the External Auditor

27.1. Appointment of Joint Executive Board Members

In accordance with Article 11 the Board of Governors submits the profiles of the Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences for approval by the Board of Trustees. It does so after having sought the advice of the University Council and the Leuven University Hospitals and LRD Executive Boards, each for matters of their own concern.

The Board of Governors proposes candidate Vice Rectors of the Humanities & Social Sciences, Science & Technology and Biomedical Sciences for appointment to the Board of Trustees, having first sought the advice of the University Council on the suggestion of the (elected) Rector.

It appoints the other Vice Rectors and the Academic Directors on the suggestion of the (elected) Rector, having first sought the advice of the University Council and, if need be, of the Executive Committee and a representative delegation of the Council for Academic Degree Programmes of the Partner University College concerned. It evaluates and dismisses them.

The Managing Director is appointed in accordance with Article 67 of these regulations.

(Outgoing) Joint Executive Board Members do not take part in the Board of Governors and the University Council's deliberations regarding the above decisions.

27.2. Appointment of Representatives in the Leuven University Hospitals and LRD Executive Boards

Having first sought the advice of the Leuven University Hospitals Executive Board, the Board of Governors selects minimum two of its external Board Members to serve on the Leuven University Hospitals Executive Board.

Having first sought the advice of the LRD Executive Board it selects minimum one of its external Board Members to serve on the LRD Executive Board.

It appoints the other external members of the Leuven University Hospitals and LRD Executive Boards, having first sought the advice of the Executive Committee concerned. It grants them annual discharge, evaluates and dismisses them.

27.3. Appointment of Members of the Kulak Executive Committee

It appoints, evaluates and dismisses members of the Kulak Executive Committee.

27.4. Appointment of an External Auditor

It appoints and dismisses KU Leuven's external auditor.

Article 28 Authorities vis-à-vis senior academic staff members

The Board of Governors exercises disciplinary authorities over senior academic staff members, in accordance with the academic staff regulations.

Article 29 Authorities concerning Executive Management inside the University

The Board of Governors appoints internal staff members to executive positions.

Article 30 Authorities vis-à-vis the Leuven University Hospitals

30.1. 30.1. The Board of Governors appoints the members of the Leuven University Hospitals Executive Board, with the exception of the Chair and the University Hospitals Executive Director, the Rector, the Vice Rector Biomedical Sciences and the Managing Director, having first sought the advice of the Leuven University Hospitals Executive Board; it evaluates and dismisses them;

30.2. it approves the strategic sub-plan;

30.3. it approves the Leuven University Hospitals' budgets and accounts;

30.4. it discusses the policy every six months;

30.5. it approves the Leuven University Hospitals Executive Board's Internal Regulations;

30.6. It approves, if need be, the charter setting out delegated authorities.

Article 31 Authorities vis-à-vis LRD

31.1. The Board of Governors appoints and dismisses the members of the LRD Executive Board with the exception of the president of the LRD Executive Board, the LRD Executive Director, the Rector, the Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences, the Vice Rector for Research and the Managing Director, having first sought the advice of the LRD Executive Board; it also evaluates and dismisses them;

31.2. it approves the strategic sub-plan;

31.3. it approves the LRD' budgets and accounts;

31.4. it discusses the policy every six months;

31.5. it approves LRD Executive Board's Internal Regulations;

31.6. It approves, if need be, the charter setting out delegated authorities.

Article 32 Authorities vis-à-vis the Kulak Executive Committee

32.1. The Board of Governors appoints and dismisses the Chair and the members of the Kulak Executive Committee, with the exception of the Managing Director, having first sought the advice of the Kulak Executive Committee and the Kulak Council;

32.2. it discusses the policy on an annual basis;

32.3. it approves the Kulak Executive Committee's Internal Regulations.

Article 33 Collaboration with, Participation in and Formation of Legal Entities

33.1. Strategically Important Cooperation Agreements

The Board of Governors decides on entering into strategically important agreements with other universities, Partner University Colleges and research institutions, with KU Leuven Association vzw and with the 'Catholic University Leuven - Université catholique de Louvain'.

33.2. Participation in and Formation of Other Legal Entities

The Board of Governors decides on the participation in and the formation of other legal entities, without prejudice to Article 12 of these regulations.

33.3. Collaboration with KU Leuven Association vzw and its Members

33.3.1. The Board of Governors stimulates collaboration with KU Leuven Association vzw and its members.

33.3.2. Conflict Settlement

The Board of Governors and the Executive Committees, as stipulated in Article 13.2.1. of these regulations, decide whether or not to start conflict management procedures with the Board of Trustees in accordance with the provisions laid down in Article 13.2.3.

Article 34 Residual Authority

The Board of Governors is authorised to decide on all matters not assigned or delegated to other Bodies by law, the decree or these statutory regulations.

Section 2. Composition and Functioning

Article 35 Composition

35.1. Members with Voting Rights

The Board of Governors has minimum eleven and maximum twenty-five members with voting rights and is made up of the following Divisions:

35.1.1. the Rector, the Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences and the Managing Director, each as long as their term of office;

35.1.2. the Chair of the Leuven University Hospitals Executive Board, appointed in accordance with Article 10 and the Chair of the LRD Executive Board, appointed in accordance with Article 10, each as long as their term of office. Said Chairs may be External Directors, in accordance with Article 35.1.3;

35.1.3. a number of Governors who are not KU Leuven staff and who are not enrolled as students, among whom at least one member of a Partner University College Division, partners in KU Leuven Association vzw. They will henceforth be referred to as External Directors.

35.1.4. Inside the Board of Governors the External Directors make up the majority of members. Each Director has one vote.

35.1.5. As stipulated in the decree of March 19, 2004 on the legal status regulations of students, participation in higher education, integration of certain sections of higher social advancement education into Partner University Colleges, and monitoring the restructuring of higher education in Flanders, the Board of Governors proposes a number of full-time University students for appointment to the Board of Trustees. Said students are nominated by the representative student organisation in accordance with the co-management model set up to implement the stipulations of the above decree of March 19, 2004. Said students must each have obtained minimum fifty-four credits at the University in the course of the two previous academic years.

35.2. Members in an Advisory Capacity Appointed by the Board of Trustees

35.2.1. One representative of the Division defined in Article 15.4.1. appointed by the Board of Trustees attends the meetings in an advisory capacity.

35.2.2. One representative nominated by the KU Leuven Association Board of Governors vzw attends the meetings in an advisory capacity.

35.3. Secretary

The Director-General of the Rector's Office and the Director of the General Management Policy Units act as the Board of Governors' secretary.

Article 36 End of Term of Office

36.1. General

By operation of law, the external members' office ends when the term expires, in accordance with Article 5.2. By way of derogation from the above stipulation, they remain in office until a replacement has been found.

In the event of death or dismissal of one or more Directors, the Board of Governors may make valid decisions even if the external members do not constitute the majority of the Board of Governors. In said case they will be replaced forthwith.

36.2. Renewal Chair's Term of Office

If the Chair's term of office finishes in the same academic year as that of the Rector, his/her office may be renewed for one more year.

36.3. Student Member's Term of Office

Student members' terms of office finish at the latest one month after their one-year membership. The term may be renewed for one year.

Article 37 Rector's Right to Include or to Adjourn Items on the Agenda

37.1. The Rector may have items added to the proximate agenda, in the course of a meeting, or call a Special Board of Governors meeting.

37.2. On the Rector's request an agenda item may be adjourned to a following meeting. The Rector can only adjourn the same item once.

Chapter IV. Academic Council

The Academic Council exercises the authorities delegated to it. Within its authority it decides how to spend the resources allocated for academic education, scientific research, student affairs – taking into account the competence of managing social services accorded by law – as well as public outreach and knowledge transfer – taking into account the competence granted to the Leuven University Hospitals and LRD.

Section 1. Authorities

Article 38 Delegated Authorities

The Board of Governors delegates to the Academic Council the authority to manage the University. This encompasses:

1. implementing the strategy and taking management decisions;

2. following up on the University wide education and research quality control;

3. distributing the funds allocated by the Board of Governors for:

- academic education;
- student affairs, with respect of the responsibilities for managing social services accorded by law;
- scientific research policy;
- public outreach and knowledge transfer activities policy, without prejudice to the authorities invested in the Leuven University Hospitals and LRD in accordance with Chapter XIII and Chapter XIV;

4. Without prejudice to Article 14 of these statutory regulations, the Academic Council may set up new Faculties and close or merge existing Faculties. It will report this to the Board of Trustees.

5. As stipulated in the academic staff regulations, the Academic Council sets up the advisory committees for senior academic staff members.

Article 39 Identity and Mission Statement and Global Strategic Vision

To implement KU Leuven's Identity and Mission Statement and its Global Strategic Vision, the Academic Council sets out the University's strategic plan, which it submits to the Board of Governors for approval.

Article 40 Approving Regulations

The Academic Council approves Group regulations, Kulak regulations, the regulations of the Councils for Academic Degree Programmes and University wide regulations on education, examinations, research as well as public outreach and knowledge transfer activities (with respect of the responsibilities for the management of social services accorded by law, and the authorities granted to the Leuven University Hospitals and LRD).

Article 41 KU Leuven Staff Ombudsperson

The Academic Council appoints the KU Leuven Staff Ombudsperson. The Staff Ombudsperson receives complaints from University staff about infringements of their rights and interests, investigates those infringements and, if need be, makes suggestions to the competent Bodies and the Services concerned.

In view of this, the Ombudsperson has the most complete right to information and interpellation.

The Academic Council gives a detailed definition and description of the regulations concerning the Staff Ombudsperson's appointment and duties.

Article 42 Power to Nominate and Formulate Advice with regard to Appointed Members of the Joint Executive Board - Electoral Committee and Supervisory Committee for Rectorial elections

The Academic Council, limited to those members who are not on the Joint Executive Board, and chaired by the longest serving Dean or - in case of equal length of service - the highest number of years:

- proposes candidate Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences to the Board of Trustees on the suggestion of the (elected) Rector, having first sought the advice of the University Council and through the Board of Governors;
- advises on the appointment of the Managing Director;
- nominates the other Vice Rectors and Academic Directors for appointment to the Board of Governors, having first sought the advice of the University Council;
- sets up the Organising Committee for Rectorial elections. Inside said organising committee, the Academic Council sets up a supervisory committee to oversee the electoral procedure.

Article 43 Advisory Power vis-à-vis the Board of Governors and in the University Council

43.1. Advisory Power vis-à-vis the Board of Governors

The Academic Council may submit proposals to the Board of Governors and advise on:

- strategy and long-term policy;
- the University's budgets and accounts;
- University staff regulations;
- the University's cultural and social commitment towards and its relations with society, the other universities, Partner University Colleges and research institutions as well as education in general.

It keeps a close eye on the Joint Executive Board and on how the approved strategic plan is implemented.

43.2. Advisory Power within the University Council

The Academic Council advises the University Council on:

- KU Leuven's Identity and Mission Statement and its Global Strategic Vision;
- the statutory regulations;
- appointing KU Leuven's representatives inside the Board of Trustees and their potential deputies;
- appointing the Board of Governors' external members and Joint Executive Board members with the exception of the Rector;
- the profile of members of the Board of Governors, with the exception of the Rector.

Article 44 Collaboration with KU Leuven Association vzw and its Members

The Academic Council actively develops the collaboration with the KU Leuven Association vzw Partner University Colleges.

Its responsibilities encompass the academic aspects of collaboration with Partner University Colleges of KU Leuven Association vzw.

Section 2. Composition and Chairmanship

Article 45 Composition

45.1. Members with Voting Rights

The Members of the Academic Council with voting rights are:

45.1.1. the Joint Executive Board Members;

45.1.2. the Deans;

45.1.3. the elected representatives of senior academic staff, junior and associate academic staff as well as the representatives of administrative and technical staff members;

45.1.4. the student representatives.

The total number of representatives, as laid down in Articles 45.1.3 and 45.1.4., must not exceed eleven.

45.2. Member in an Advisory Capacity:

The academic staff Ombudsperson attends meetings in an advisory capacity.

45.3. Secretary:

The Director-General of the Rector's Office and the Director of the General Management Policy Units are the Academic Council's secretaries.

Article 46 Chairmanship

The Rector chairs the Academic Council.

The Academic Council, limited to those members who are not on the Joint Executive Board, is chaired by the longest serving Dean or, in case of equal length of service, with the highest age.

Article 47 Meeting Frequency

The Academic Council meets at least six times each academic year.

Chapter V. Special Academic Council

The Special Academic Council determines the general policy for senior academic staff members. It appoints and promotes said staff.

Section 1. Authorities

Article 48 Authorities

The Special Academic Council determines the general policy for recruiting, appointing and promoting senior academic staff.

Having first sought the advice of the Special Executive Committees, it decides on the appointment, permanent appointment and promotion of, as well as requests to dismiss senior academic staff members, without prejudice to the authority of the Board of Trustees as laid down in Article 14.

It assigns senior academic staff members to a Faculty and, if need be, to a Department.

Section 2. Composition and Functioning

Article 49 Composition

The Special Academic Council consists of the Joint Executive Board members and the Deans. The academic staff Ombudsperson attends meetings in an advisory capacity.

Article 50 Chairmanship

The Rector chairs the Special Academic Council.

Chapter IV. Joint Executive Board

The Joint Executive Board acts as the University's executive. It is responsible for administratively coordinating the various Management Bodies. As the Board of Governors' and Academic Council's Executive Board, it prepares meetings of the Board of Trustees, the Board of Governors, the Academic Council, the Special Academic Council and the University Council. The Board of Governors may also assign other duties to it.

Section 1. Authorities

Article 51 Authorities

51.1. Authorities vis-à-vis KU Leuven

1. The Joint Executive Board sets out KU Leuven's policy and a concept long-range plan, based on the existing strategic sub-plans.
2. It administratively coordinates and oversees the content of meetings of the Board of Trustees, the Board of Governors, the Academic Council, the Special Academic Council and the University Council, and implements their decisions involving the University.
3. It draws up KU Leuven's integrated annual report and reports on the implementation of the strategic plan.

51.2. Authorities vis-à-vis the University

1. It prepares the strategic visions and management decisions about academic education, scientific research, knowledge transfer activities and public outreach for approval by the Academic Council, within the scope of the Leuven University Hospitals and LRD

Executive Boards' authorities, and subsequently makes sure these decisions are implemented. In view of this, it sets out the University's concept strategic plan.
2. It acts as the University's executive, in which capacity it takes all necessary initiatives and decisions; it tunes with both the Leuven University Hospitals and LRD.
3. It draws up the University's budget and accounts.
4. It monitors the efficiency of the internal quality, risk management and control systems.
5. It enters into agreements with the other universities, the university colleges, the research institutions, KU Leuven Association vzw and the 'Catholic University Leuven - Université catholique de Louvain', or works them out. To close strategically important agreements for KU Leuven as a whole, the Joint Executive Board submits a proposal of decision to the Board of Governors.
6. It ratifies public outreach and knowledge transfer activities agreements made by the Managing Director regarding public outreach and knowledge transfer activities that the University offers to the Leuven University Hospitals, LRD and potential third parties.
7. It takes legal action by request of the University, without prejudice to the authority of the Leuven University Hospitals and LRD Executive Boards.
8. It appoints junior and associate academic staff members who do not belong to any Group, and members of the research management staff.
9. It appoints or recruits A level administrative and technical staff, without prejudice to Article 29 of these regulations.
10. It has the authority to settle disputes inside and between the Groups and Services.

Section 2. Composition, Chairmanship and Term of Office

Article 52 Composition

52.1. The Joint Executive Board consists of:

- the Rector, who is also its Chair;
- the Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences;
- the Vice Rector Kulak;
- maximum four Vice Rectors charged with research, education, student affairs and internationalisation policies;
- the Managing Director.

Other authorities - such as coordinating academic degree programmes on external campuses, overseeing the diversity and the academic staff policies - may be granted to Joint Executive Board members.

52.2. In accordance with the co-management model for implementing the stipulations of the decree of 19 March, 2004 on the legal status regulations for students, participation in higher education, the integration of certain departments of higher social advancement education into Partner University Colleges and monitoring the restructuring of higher education in Flanders, a student member of the Board of Governors attends Joint Executive Board meetings, except those dealing with staff issues.

52.3. Both the Director-General of the Rectorial Services and the Director of the General Management Staff Policy Units attend as secretaries.

Article 53 Term of Office

53.1 A Joint Executive Board member's term of office ends at the same time as the Rector's, with the exception of that of the Managing Director. Outgoing Joint Executive Board members remain in office until a new Joint Executive Board has been appointed.

53.2. Joint Executive Board - Term of Office

The number of four-year terms of office a Joint Executive Board member may serve is:

- unlimited for the Managing Director, in accordance with Article 69 of these regulations;
- limited to three, of which maximum two in the same office, for Vice Rectors.

The Rector may serve maximum two terms as Rector, regardless of all other offices served or to be served on the Joint Executive Board.

Article 54 Chairmanship

The Rector chairs the Joint Executive Board.

Section 3. Functioning

Article 55 Decision by Consensus

The Joint Executive Board decides by consensus. If no consensus is reached, the Rector will submit the decision to the Board of Governors, which decides.

Chapter VII. University Council

The University Council liaises between the Board of Governors and the Academic Council with a view to direct contact and deliberation.

Section 1. Authorities

Article 56 Authorities

The University Council advises on the profile of the Chair and members of the Board of Governors, with the exception of the Rector, who is elected.

The University Council advises on how the Identity and Mission Statement and the Global Strategic Vision are to be drafted and amended; also how statutory regulations are to be drafted and amended. It advises on the appointment of KU Leuven representatives in the Board of Trustees as well as nominations for external members of the Board of Governors.

Once a year, the University Council is informed on the progress of the University's policy plan, including the support from General Management Services, the progress made on the Leuven University Hospitals and LRD policy plans, and the progress on KU Leuven Association vzw policy plans.

The University Council is the Board of Governors and the Academic Council's consultative body; it discusses all matters of general importance and formulates advice by declared simple majority inside the Board of Governors and the Academic Council.

Section 2. Composition, Chairmanship and Functioning

Article 57 Composition and Chairmanship

The University Council consists of the members of the Board of Governors and the Academic Council. The Rector chairs the University Council.

Article 58 Meeting Frequency

The University Council meets minimum once a year.

Chapter VIII. Rector

Section 1. Authorities

Article 59 Authorities

59.1. General

The Rector represents KU Leuven and its community, both internally and externally.

The Rector has the statutory power of representation to represent KU Leuven, both judicially and extrajudicially, in accordance with Article 1.2.

59.2. Vis-à-vis the Board of Trustees

The Rector attends Board of Trustees meetings in an advisory capacity.

The Rector can have items added on the Board of Trustees agenda and have a special Board of Trustees meeting convened.

During meetings addressing the appointment and the dismissal of a Vice Rector, the Managing Director, the Chair of the Leuven University Hospitals Executive Board and the Leuven University Hospitals and LRD Executive Directors, the Board of Trustees must consult with the (elected) Rector before coming to a decision. During meetings discussing the dismissal of the Chair of the Board of Governors, the Board of Trustees can only decide when the Rector is also present and heard.

When candidates for membership of the Joint Executive Board, for Managing Director, Chair of the Leuven University Hospitals Executive Board, Chair of the LRD Executive Board, University Hospitals and LRD Executive Directors, are due for appointment in absence of nominations within the imposed term, he (elected) Rector must be heard.

For decisions on the dismissal or the suspension of the Rector, the Board of Trustees will hear the Rector on his/her request.

59.3. Vis-à-vis the Board of Governors

The Rector is a member of the Board of Governors. By virtue of his/her office the Rector assumes special responsibility for evaluating and boosting KU Leuven's strategic plan (including sub-plans), academic education, scientific research, academic knowledge transfer activities and public outreach inside the University, the Leuven University Hospitals and LRD.

The Rector may have items added to the proximate Board of Governors meeting or during a meeting, and have a special Board of Governors meeting convened. On the Rector's request, an agenda item may be adjourned to a following meeting.

The Rector can only adjourn the same item once.

At all times, the Rector can order the interim evaluation of the efficiency of Joint Executive Board members, the Chair of Leuven University Hospitals Executive Board and the University Hospitals Executive Director, as well as the Chair of the LRD Executive Board and the LRD Executive Director. The Rector may call upon the competent Bodies defined in Articles 10 and 27 to have individuals occupying one of the above executive positions suspended by way of temporary measure or dismissed.

59.4. Inside the University

The Rector chairs the Academic Council, the Special Academic Council, the Joint Executive Board and the University Council. As Chair he/she sets the agenda for their meetings, which he/she also convenes.

The Rector has the right of initiative regarding the composition of the Joint Executive Board, without prejudice to Article 67. Before formulating proposals the Rector must consult with the Board of Governors and the Academic Council.

The Rector chairs the Joint Executive Board and, together with the other Joint Executive Board members, he/she is responsible for preparing and implementing the University's policy.

The Rector and/or one member of the Joint Executive Board, appointed by the Rector, may at all times attend in an advisory capacity meetings of the University's Management Bodies listed in these regulations to which they are not invited by virtue of their office, with the exception of Board of Trustees meetings, without prejudice to Article 15.2 of these regulations.

Section 2. Election, Appointment and Term of Office

Article 60 Conditions of Eligibility

Candidates for the Rectorial office must be KU Leuven full professors or part-time full professors with full-time employment at the KU Leuven as a result of other functions. Candidates must endorse KU Leuven's Identity and Mission Statement, its Global Strategic Vision, the statutory regulations and other regulations.

Article 61 Members with voting rights

The following individuals may vote for the Rector:

- all senior academic staff members and teaching staff group 3 members in so far as they are cumulatively linked to KU Leuven or Z.org KU Leuven for at least 80%;
- part-time full professors with a minimum 50% contract at KU Leuven.

For elections, those entitled to vote on the basis of the present article must constitute at least two thirds of the electoral college. The exact composition of the remaining third is defined in the electoral regulations drafted by the Academic Council.

Article 62 Electoral Provisions

The electoral provisions are proposed by the Academic Council and approved by the Board of Governors.

Article 63 Term of Office

Upon nomination by the Board of Governors, the candidate elected for Rectorial office is appointed Rector by the Board of Trustees for a period of four years.

Rectors may stay in office maximum eight years.

Chapter IX. Managing Director

Section 1. Authorities

Article 64

The Managing Director is responsible for the University's global, logistic, administrative and financial organisation, follows up on its establishment plan and is in charge of implementing all of the former.

The Managing Director has the statutory power of representation to statutorily represent KU Leuven judicially and extrajudicially in accordance with Article 1.2.

Article 65

As the Board of Governors' representative, the Managing Director monitors KU Leuven's financial policy and financial equilibrium, without prejudice to Article 89 of these regulations, and reports financial problems directly to the Board of Governors forthwith.

Article 66

The Managing Director is on the Joint Executive Board and exercises the authorities laid down in Article 65 in consultation with the Executive Board.

Section 2. Appointment, Evaluation and Term of Office

Article 67 Appointment

The external members of the Board of Governors recommend the Managing Director for appointment to the Board of Trustees, having first sought the advice of the Academic Council and heard the Rector.

In case of a first appointment the external members of the Board of Governors will set up a search committee and organise an external assessment.

Article 68 Evaluation

In the course of his/her last year in office, the Managing Director is evaluated by the Board of Trustees. In view of this, the Board of Trustees seeks the advice of the Rector, the Board of Governors and the Academic Council.

Article 69 Term of Office

The Managing Director is appointed for renewable periods of maximum four years. If the office of Managing Director ends in the same academic year as the Rector's, the Board of Trustees may extend the Managing Director's term in office with one year.
If the Managing Director wishes to take part in Rectorial elections, he/she must resign as Managing Director at the latest by August 1 of the year prior to the elections. If the Rector's term ends before the imposed term, the Board of Trustees may grant deviation from this rule.

Chapter X. Management Bodies of the Various Groups

Section 1. Group Executive Committee

Subsection 1. Authorities

Article 70 Authorities

70.1. General

The Group Executive Committee develops the Group's policy within the authorities granted by the Board of Governors, the Academic Council and the Joint Executive Board.
In view of this, it sets out a multi-annual Group policy plan that is submitted to the Joint Executive Board and the Academic Council. It is responsible for the Group's day-to-day administration and for preparing, coordinating and implementing said policy.

Together with the Faculties and the Departments it sets out the goals for implementing the educational duties, research performance and knowledge transfer activities, and evaluates their implementation.

It distributes the direct operational funds allocated to the Group for education, research and Group services among the next-level units.

It divides the space allocated to the Group among the Faculties and the Departments.

It outlines investment priorities inside the Group.

It is responsible for amendments to the organisational chart inside the Group. It can set up ad hoc concertation units with specific duties, without prejudice to Article 76bis.

It settles disputes inside the Group. In case of unsolved disputes, the Joint Executive Board decides in accordance with Article 51.2 of these regulations.

70.2. Group Regulations

The Group Executive Committee draws up Group regulations, which are submitted to the Academic Council for approval.

70.3. Activities and Services across Faculties and Departments

The Group Executive Committee is responsible for activities across Faculties and Departments inside the Group.

It monitors Group services.

70.4. Staff Management

The Group Executive Committee has authorities over academic staff members as defined in the academic staff regulations.

It approves profile-based vacancies for senior academic staff members in accordance with the academic staff regulations and can create profile-based vacancies for matters across Departments and Faculties.

It decides on the appointment of level B/C and D administrative and technical staff inside the Group.

70.5. Authorities vis-à-vis Faculties, Departments and Special-Duty Entities.

The Group Executive Committee approves the setting up of Departments, Special-Duty Entities and possibly also Subdivisions.

It approves Faculty and Departmental regulations.

It periodically evaluates the Faculties' and Departments' policy plans.

At least twice a year it organises consultation sessions between the Group Executive Committee and Heads of Department of the Science & Technology and Biomedical Sciences Groups to discuss the research policy. A consultative meeting can be called with a minimum quorum, in accordance with the regulations. The agenda may contain items on research, on ensuring sufficient teaching capacity and the integration of both, as well as on staff policy, within the scope of the Group Executive Committee's authorities.

70.6. Educational Authorities

In accordance with Group regulations, the Group Executive Committee decides on proposals from the Faculty Boards or other Bodies, related to the study programmes and to organising

and evaluating said study programmes. The Group Executive Committee ratifies the assigning of teaching duties.

It decides on interfaculty education proposals devised under the supervision of and after mutual consultation between the Deans.

It can set up study programmes across Faculties.

At Group level, it can organise one or more Programme Committee(s) overseeing degree programmes across Faculties.

70.7. Authorities vis-à-vis the Vice Rector Kulak and the Academic Directors

In consultation with the Vice Rector Kulak and the Academic Directors, the Group Executive Committee is partly responsible for and coordinates education and research at Kulak and Partner University College campuses respectively.

It decides which Bodies of the Group or its Subdivisions may be joined by Kulak members and members of the other campuses. The Vice Rector Kulak and the Academic Directors may request that the Group Executive Committee discuss issues relating to Kulak and Partner University College campuses and to be heard about them.

70.8. Delegation

Under these Group regulations the authorities defined in this article, as approved by the Academic Council, may be delegated to members of the Group Executive Committee, the Faculties, Departments or Special-Duty Entities.

Subsection 2. Composition and Duration

Article 71 Composition

71.1. Members with Voting Rights

The Group Executive Committee consists of minimum six and maximum thirteen members with voting rights.

The following individuals serve on the Group Executive Committee by virtue of their office:

71.1.1. the Vice Rector of the Group concerned;

71.1.2. the Deans of the Group concerned;

71.1.3. the research coordinator of the Group concerned, appointed by the Group Executive Committee and, should the case arise, in consultation with the Heads of Department. Detailed appointment provisions and authorities are defined in the Group regulations. The research coordinator may also be the Head of the Doctoral School.

71.1.4. the Group Manager of the Group concerned. Detailed appointment provisions and authorities are defined in the Group regulations.

71.1.5. for the Biomedical Sciences Group: the Leuven University Hospitals Executive Director. Leuven.

71.1.6. 71.1.6. The Group Executive Committee also includes one student and one representative of the junior and associate academic staff representing their Group in the Academic Council. They may not take part in deliberations and decisions over staff issues.

71.2. Members in an Advisory Capacity

One elected administrative and technical staff representative.

Subsection 3. Functioning

Article 72 Decision-Making

The Group Executive Committee decides by consensus. If no consensus is reached, the Vice Rector submits the proposed decision to the Joint Executive Board, which decides.

Section 2. Special Group Executive Committee

Subsection 1. Authorities

Article 73 Authorities

The Special Group Executive Committee advises the Special Academic Council on the appointment, permanent appointment and promotion of senior academic staff members of the Group concerned.

It assesses the proposals for profile-based and subject vacancies and passes them on - with appropriate advice - to the Special Academic Council.

It discusses the advisory committees' counsel and proposes appointment and promotion of senior academic staff members to the Special Academic Council.

It submits proposals to the Special Academic Council regarding the annual selection of senior academic staff members within the context of the Special Research Fund and other specific financing mechanisms.

Subsection 2. Composition and Chairmanship

Article 74 Composition

The Special Group Executive Committee consists of the Group Executive Committee's senior academic staff members.

The Vice Rectors responsible for the education and research policy are on the Special Group Executive Committee. The Vice Rectors of the other Groups, the Vice Rector Kulak and the Academic Directors may attend meetings as acting members.

Article 75 Chairmanship

The Vice Rector of the Group concerned chairs Special Group Executive Committee meetings.

Chapter XI. Kulak Management Bodies and Management Bodies/Executive Positions Responsible for KU Leuven Programmes at Partner University College Campuses

Section 1. Kulak

Article 76

76.1. Kulak's internal Management Bodies are:

1. the Vice Rector Kulak;
2. the Kulak Executive Committee;
3. the Kulak Management Committee;
4. the Kulak Council;
5. the Subfaculties Human & Social Sciences Kulak, the Science & Technology Group Kulak and the Biomedical Sciences Group Kulak, and their Councils.

Stipulations regarding the subfaculties Humanities & Social Sciences Kulak, the Science & Technology Group Kulak and the Biomedical Sciences Group Kulak are described in detail in the specific regulations in accordance with Article 76.6. of these regulations. The same goes for the structures of the campuses integrating into Kulak.

They perform their duties as delegates of the Board of Governors, the Academic Council and the Joint Executive Board.

76.2. The Vice Rector Kulak is responsible for preparing and implementing Kulak's policy in accordance with these regulations. As a member of the Joint Executive Board, the Vice Rector is responsible for setting out and implementing Kulak's policy regarding students, education, internationalisation, scientific research and knowledge transfer activities. He/she chairs the Kulak Council.

76.3. the Kulak Executive Committee consists of:

1. the Vice Rector Kulak;
2. the Managing Director;
3. three senior academic staff members, one from each Group and all employed full-time at Kulak;
4. non-University staff members, appointed by the Board of Governors, specifically also including committee members of the KU Leuven Association vzw regional partners;
5. a student representation as specified in the Special Kulak Regulations.

Members listed under 4° must constitute at least half the members of the Executive Committee.

The Chair of the Kulak Executive Committee is chosen by the Board of Governors among the members listed under 4°.

By appointment of the Board of Governors, the Kulak Executive Committee is responsible for approving the draft budget as submitted by the Kulak Management Committee, including managing the funds and defining the infrastructural works, as well as monitoring policy implementation.

For specific policy aspects the coordinators responsible for students, education, internationalisation and Kulak research as well as the Vice Rectors of the Groups may attend.

76.4. The Kulak Management Committee consists of the senior academic staff members on the Kulak Council.

It is chaired by the Vice Rector Kulak.

The Kulak Management Committee is responsible for the administrative coordination, content preparation of Kulak Council and Kulak Executive Committee meetings and for implementing their decisions.

It deals with all financial and staff issues, as stipulated in the special Kulak regulations.

76.5. Kulak Council

76.5.1. The composition of the Kulak Council is defined in the Special Kulak Regulations.

76.5.2. The Kulak Council advises the Vice Rector on the policy plan, including those aspects regarding students, education, scientific research and knowledge transfer activities within the guidelines defined by the Academic Council and - should the case arise - by the Groups, Faculties and Departments complying with the rules specified in the special regulations listed in Article 76.6.

76.6. Having first sought the advice of the Kulak Council, the Kulak Executive Committee and the Academic Council, the Board of Governors will issue special regulations detailing the rules regarding the formation of the Management Committee, the Kulak Council, the Kulak Management Committee and the Subfaculties Humanities & Social Sciences Kulak, the Science & Technology Group Kulak and the Biomedical Sciences Group Kulak, with a view to exercising their authorities and organising Kulak internally.

Section 2. The Management Bodies and Executive Positions Responsible for KU Leuven Programmes on Partner University College Campuses

76bis. The Management Bodies are:

- the Executive Committee
- the Academic Director
- the Council for Academic Degree Programmes

Said Management Bodies perform their duties by delegation of the Board of Governors, the Academic Council and the Joint Executive Board.

Subsection 1. Executive Committee

76ter. **Authorities**

1. On the Partner University College campus, the Executive Committee acts as observing party for the authorities delegated to it.

2. The Executive Committee monitors the correct implementation of said delegated authorities, as well as the establishment and the forging of cross-links between professional Bachelor's programmes and Fine Arts Degrees at Partner University Colleges and KU Leuven Academic Degree Programmes.

3. The Executive Committee formulates advice (in a meeting not attended by the Academic Director) on the appointment of the Academic Director by KU Leuven, and will propose him/her as a Management Committee member.

4. In accordance with Article 13.2. of these regulations the Executive Committee may start a conflict settlement procedure with the Board of Trustees over disputes about the implementation of delegated authorities, after all other listed internal mediation procedures have been exhausted.

76quater. **Composition**

The Executive Committee consists of:

1. Members of the Board of Governors of the Partner University College;

2. In as far as they are not members of the Board of Governors of the Partner University College:

    2.1. the Academic Director;

    2.2. another member of the university administration, delegated by the KU Leuven Board of Governors;

    2.3. the students as stipulated in the participation decree;

    2.4. should the case arise, those members defined in Article 76.3 can also be members.

76quinquies. The Chair of the Partner University College's Board of Governors chairs the Executive Committee unless otherwise stipulated in the cooperation agreement.

Subsection 2. Academic Director

76sexies. **Authorities**

1. In consultation with the other members of the university administration, the Academic Director is responsible for the preparation, implementation and evaluation of the policy regarding KU Leuven academic degree programmes;
2. In view of this, he/she is on the Academic Council and the Special Academic Council, and where applicable on Special Group Executive Committees;
3. He/She makes suggestions regarding education, research, student affairs, public outreach, internationalisation, … to the University's Management Bodies of which

he/she is a member, and to this end gives positional leadership to the services responsible for the academic degree programmes, without harming the authorities of the Deans, Heads of Unit, Vice Rectors and the University's Managing Director, who bear the hierarchical responsibility;
4. He/She is the regional public face of academic degree programmes, without prejudice to the stipulations in Article 1;
5. Chairs the Council for Academic Degree Programmes;
6. For the performance of his/her duties, he/she is a member 'on location' of the Partner University College's Executive Committee and Management Committee.

76septies. **Appointment**

The Board of Governors appoints the Academic Director - who must be senior academic staff - on the recommendation of the (elected) Rector and having first sought the advice of the University Council. Before he/she takes up this position, the (elected) Rector seeks advice on this planned appointment from the Executive Committee, the Executive Director of the Partner University College, and a representative delegation of the Council for Academic Degree Programmes, as stipulated in the Internal Regulations.

Subsection 3. the Council for Academic Degree Programmes

76octies. **Authorities**

The Council advises the Academic Director. The Council may set up an Internal Bureau.

76nonies. **Composition**

The Internal Regulations of the Council for Academic Degree Programmes outline the practical representation of senior academic staff members, teaching staff within the integration framework, junior and associate academic staff members, administrative and technical staff members and student representatives for the academic degree programmes. The KU Leuven student co-management model remains valid regarding the application of the student participation decree. Said regulations are approved by the KU Leuven Academic Council, which monitors their uniformity. The Academic Director drafts the proposal for regulations, including an amendment procedure.

Chapter XII. Management Bodies of the Faculties, Departments and other Subdivisions

Section 1. Faculties

Article 77 Faculties

There are fifteen Faculties:

1. the Faculty of Theology and Religious Studies;
2. the Institute of Philosophy;
3. the Faculty of Law;
4. the Faculty of Business and Economics;
5. the Faculty of Social Sciences;

6. the Faculty of Medicine;
7. the Faculty of Arts;
8. the Faculty of Psychology and Educational Sciences;
9. the Faculty of Sciences;
10. the Faculty of Engineering Science.;
11. the Faculty of Bioscience Engineering;
12. the Faculty of Pharmaceutical Sciences;
13. the Faculty of Kinesiology and Rehabilitation Science;
14. the Faculty of Engineering Technology;
15. the Faculty of Architecture

Without prejudice to Article 14 of these statutory regulations, the Academic Council may set up new Faculties and close or merge existing Faculties. It will report this to the Board of Trustees.

The status and the organisation of the Special Faculty of Canon Law are laid down in special regulations.

All senior academic staff members belong to one of the above Faculties. The Special Academic Council assigns senior academic staff members to a Faculty.

The Faculties' Bodies are: the Faculty Board, the Faculty Council and the Dean.

In Groups whose Group regulations do not introduce a departmental structure, the Faculty Board acts as Department Board.

Article 78 Faculty Board

78.1. General

The Faculty Board exercises its authority as delegated by the Academic Council, the Joint Executive Board and the Group Executive Committee.

78.2. Educational Authorities

The Faculty Board is responsible for educational aspects, which it organises and whose quality it monitors in accordance with the education regulations approved by the Academic Council.

It is responsible for the programme offerings and how they are laid out.

It is responsible for the education infrastructure and practical organisation.

It is responsible for student affairs linked to degree programmes.

It decides on the duties, the composition and the functioning of the Programme Committees.

It coordinates education evaluations, among other things via the Programme Committees.

It assigns teaching duties in consultation with the Programme Director(s) concerned and the Head(s) of Department, in accordance with Academic Staff Regulations.

The Faculty Board proposes an education policy plan to the Group Executive Committee.

The Faculty Board is granted educational resources by the Group Executive Committee in accordance with the intra-group allocation model.

In Groups divided into Departments, Department Boards are allocated part of the staff resources for funding the teaching capacity. In view of this, the Faculty Board actively and structurally involves the Department Boards in how the teaching is organised. This can be done, among other things, through delegation of the Heads of Department in the Faculty Board and/or via regular consultation with the (Vice) Deans concerned and the Heads of Department. With a view to having items added on the Group Executive Committee's agenda, the Heads of Department will in their turn consult the Dean(s) concerned about the educational aspects of departmental policy plans and departmental profile-based vacancies.

78.3. Other Authorities

The Faculty Board is responsible for distributing the direct operational funds allocated to the Faculty and allocates the space for exercising Faculty authorities.

It draws up a Faculty budget about which it regularly consults with the Group Executive Committee.

It is responsible for the Faculty international contacts, contacts with the relevant 'employment-related stakeholders' and alumni, as well as the Faculty information and recruitment activities.

It is responsible for the Faculty public outreach.

78.4. Composition

The Composition of the Faculty Board is laid down in the Faculty regulations.

The Dean is a member of and chairs the Faculty Board.

As laid down in the participation decree, one or more students are members of the Faculty Board for renewable terms of one year with a maximum total duration of four years. Student(s) do not participate in deliberations and discussions about staff issues.

One representative of the junior and associate academic staff and one representative of the administrative and technical staff also attend, except regarding staff issues. The former representative remains a member for two years, renewable once.

78.5. Functioning

The Faculty Board draws up Faculty regulations, which it submits to the Group Executive Committee for approval.

Article 79 The Faculty Council

79.1. The Faculty Council consists of the Faculty senior academic staff members with a minimum 80% contract at KU Leuven, level 3 research managers, a representative of the part-

time senior academic staff, and a student representative as laid down in the participation decree (for a renewable period of one year, with a maximum total duration of four years), junior and associate academic staff (for a renewable period of two years, renewable once) and administrative and technical staff, as stipulated in the Faculty regulations. Under this article, Group 3 teaching staff (lecturers, associate professors, professors) are put on a par with senior academic staff; all other teaching staff members are equivalent to junior academic staff.

79.2. The Dean chairs the Faculty Council.

79.3. Authorities

The Faculty Board submits its policy to the Faculty Council for approval.

The Faculty Council elects the Dean.

79.4. Functioning

The Faculty Council meets at least twice a year. It can be convened with a minimum quorum (to be laid down in the Faculty regulations) with a view to putting Faculty items on the agenda.

Article 80 Dean

80.1. Authorities

The Dean:

- prepares and implements the Faculty's policy, in accordance with these regulations, and represents it to the outside world. The Dean is an ex officio member of the Group Executive Committee, the Special Group Executive Committee and the Academic Council, the Special Academic Council and the University Council;
- he/she convenes the Faculty Council and the Faculty Board, sets the agenda and chairs the meeting;
- he/she can, on his/her own initiative, nominate maximum 3 Vice Deans with specific authorities, for approval by the Faculty Council.

80.2. Appointment

The Dean is elected by the Faculty Council, among the full professors and part-time full professors with an open-ended contract of minimum 80% at KU Leuven. Elections comply with the electoral regulations laid down by the Academic Council and complemented by Faculty regulations. Conditions for eligibility must be met at the time of taking up office, with the proviso that decisions to be taken by Management Bodies are definitive at the time of candidacy.

Section 2. Departments

Article 81 Departments

Inside the Biomedical Sciences and Science & Technology Groups, the Group also has Departments, alongside Faculties. Each Department spans as homogenous as possible a research field and has enough members to efficiently perform its Departmental duties.

The Special Group Executive Committee assigns senior academic staff members to a specific Department or a Special-Duty Entity.

The Group Executive Committee can set up, close, split or merge Departments.

The Department Board, The Department Council and the Head of Department make up the Department's Management Bodies.

Article 82 Department Board and Department Council

82.1. Department Board

The Department Board exercises its authorities as delegated by the Academic Council, the Joint Executive Board and the Group Executive Committee.

The Department Board is responsible for research policy.

It is responsible for distributing the direct operational funds and the space allocated by the Group Executive Committee.

It submits a policy plan to the Group Executive Committee, and regularly confers about this with the Group Executive Committee.

In consultation with the Dean(s) concerned, it draws up profile-based vacancies, which it submits to the Group Executive Committee.

It guarantees sufficient educational competence and capacity to run its programmes.

It deals with staff policy as well as matters exerting an impact on organising the education aspects, in consultation with the Dean.

It attends to knowledge transfer activities.

Upon internal consultation, it can propose the use of funds sourced externally by senior academic staff members or departmental sections to finance initiatives across sections.

It sends the agendas and minutes of Department Board meetings to the Deans concerned who, in the case of educational matters, may ask for a decision to be amended, or for a specific subject to be added on the agenda and a solution to be found.

The Department Board is made up in accordance with regulations approved by the Group Executive Committee. A student representative (for a renewable period of one year with a maximum total duration of four years), a representative of the junior and associate academic staff (for a renewable period of two years, renewable maximum once) and a representative of the administrative and technical staff are on the Department Board but do not participate in discussions about staff issues. In the Biomedical Sciences Group the junior and associate academic staff representative may be a trainee physician-specialist.

82.2. Department Council

The Department Council is made up in accordance with regulations approved by the Group Executive Committee. The Department Board submits its policy to the Department Council.

The Department Council elects the Head of Department.

Article 83 Head of Department

The Head of Department

- prepares and implements the Department's policy, in accordance with these regulations;
- will be heard - if he/she is not on the Advisory Committee - about the appointment and promotion of staff members in his/her own Department;
- confers with the Dean(s) concerning educational aspects of profile-based vacancies inside the Department;
- receives information regarding the evaluation results of the department members' teaching achievements.

Chapter XIII. Leuven University Hospitals Executive Board

Article 84 General

The Board of Governors sets up a Leuven University Hospitals Executive Board. The Board of Governors delegates the organisation, functioning and management of the Leuven University Hospitals to the Leuven University Hospitals Executive Board, as laid down in the Law on hospitals and other health care institutions, coordinated on July 10, 2008.

Section 1. Authorities

Article 85 Authorities

Within the authorities delegated to it, the Leuven University Hospitals Executive Board is authorised to:

i. set out the Leuven University Hospitals strategic plan as part of the KU Leuven mission statement and Global Strategic Vision. This strategic plan is submitted for approval to the Board of Governors;

ii. formulate the Leuven University Hospitals general policy (including the medical policy) and partial strategy, having first sought the advice of the Leuven University Hospitals Management Committee. The Leuven University Hospitals Executive Board monitors coordination efforts with the University and LRD. It elucidates this policy and this strategy to the Board of Governors, at least every six months and once based on the annual report, when draft budget and draft balance sheet are presented;

iii. monitor how the policy is implemented, and how the strategic options taken by the Leuven University Hospitals Management Committee are realised;

iv. ensure satisfactory compliance by the Leuven University Hospitals Management Committee with the University Hospitals' academic duties, facilitate the hospital's satisfactory integration into the Biomedical Sciences Group and arrange mutual consultation between the Biomedical Sciences Group and the Leuven University Hospitals Management Committee;

v. appoint and dismiss members of the Leuven University Hospitals Management Committee, with the exception of the University Hospitals Executive Director, and establish the salary policy for Executive and Management staff upon nomination by the Leuven University Hospitals Remuneration and Appointment Committee;

vi. periodically evaluate - together with the University Hospitals Executive Director - those members of the Leuven University Hospitals Management Committee who are not on the Leuven University Hospitals Executive Board;

vii. set a draft budget and a draft balance sheet that are submitted annually for approval to the Board of Governors;

viii. advise the Board of Governors on the appointment of an external auditor who, in accordance with Article 80 of the Law on hospitals, checks the Leuven University Hospitals balance sheet;

ix. manage KU Leuven's share in revenues obtained from hospital activities, by delegation of the Board of Governors;

x. decide on important infrastructural works on the proposal of the Leuven University Hospitals Management Committee;

xi. define Leuven University Hospitals' global staff policy as to status, wages, and terms and conditions of employment;

xii. appoint medical staff in accordance with the provisions stipulated in the Leuven University Hospitals Internal Regulations, upon prior advice from the Medical Board, the selection committee concerned and the consultative committee liaising between the Biomedical Sciences Group and the Leuven University Hospitals;

xiii. enter into agreements with third parties and take legal action for matters delegated to the Leuven University Hospitals Executive Board;

xiv. monitor compliance with the specific legislation and regulation. The Executive Board obtains the advice of the Medical Board on matters laid down in the Law on hospitals;

xv. monitor the functioning of internal quality, risk management and control systems;

xvi. set up a system to evaluate its internal functioning.

Section 2. Composition

Article 86 Composition

86.1. The Leuven University Hospitals Executive Board is made up of members with voting rights and members in an advisory capacity.

86.2. Members with Voting Rights

The following members of the Leuven University Hospitals Executive Board have the right to vote:

- the Chair of the Leuven University Hospitals Executive Board, appointed by the Board of Trustees upon nomination by the Board of Governors, itself having first sought the advice of the Leuven University Hospitals Executive Board and having heard the Rector;
- the Rector, the Vice Rector Biomedical Sciences, the Managing Director, the University Hospitals Executive Director and the Z.org KU Leuven Executive Director, as long as they remain in office;
- minimum two external members of the Board of Governors, appointed by the Board of Governors and with expertise in economic, financial and management matters or health care;
- minimum two added external members of the Leuven University Hospitals Executive Board, appointed by the Board of Governors, having first sought the advice of the Leuven University Hospitals Executive Board. One of the external members is nominated by the Vlaams Ziekenhuisnetwerk and one by Z.org KU Leuven.

86.3. Members in an Advisory Capacity

Attend Leuven University Hospitals Executive Board meetings in an advisory capacity:

- maximum five physicians-clinicians, all of them Leuven University Hospitals staff and from at least three different disciplines;
- maximum two members from different Leuven University Hospitals staff divisions;
- the Chief Medical Officer of Leuven University Hospitals.

86.4. The General Secretary of the Leuven University Hospitals is secretary of the Leuven University Hospitals Executive Board.

Section 3. Functioning

Article 87 Leuven University Hospitals Remuneration and Appointment Committee

Without prejudice to the application of Article 24, the Leuven University Hospitals Executive Board will set up an internal Leuven University Hospitals Remuneration and Appointment Committee. In view of this, it will propose a specific composition to the Board of Governors.

Article 88 Meeting Frequency and Calendar

The Management Committee meets at least six times a year.

The Rector and/or the Chair of the Board of Governors may have items added to the agenda of the proximate meeting or have a special Leuven University Hospitals Executive Board meeting called.

Article 89 Urgent Reporting

By appointment of the Board of Governors, the Chair of the Leuven University Hospitals Executive Board and the Leuven University Hospitals Executive Director individually monitor the Leuven University Hospitals financial policy and financial equilibrium. Financial problems must be reported to the Board of Governors forthwith.

Chapter XIV. Leuven University Hospitals Executive Director

Article 90 Authorities

The Leuven University Hospitals Executive Director is responsible for the Leuven University Hospitals global, logistic, administrative, financial and medical organisation, without prejudice to the authorities of the Head Physician, the Director of Nursing and the Medical Board, as laid down in Article 84 of the Law on hospitals. The Leuven University Hospitals Executive Director is charged with implementing said policy and within these responsibilities inside KU Leuven, he/she has statutory power of representation, judicially and extrajudicially, as laid down in Article 1.2.

Article 91 Appointment

In consultation with the Rector, the Board of Trustees appoints the Leuven University Hospitals Executive Director upon nomination by the Board of Governors, itself on the prior advice of the Leuven University Hospitals Executive Board.

Article 92 Evaluation

In the final year of each term of office, the Leuven University Hospitals Executive Director is evaluated on the various authorities delegated to him/her, including those of General Manager as laid down in the Law on hospitals. This is done by the Board of Governors, itself having first sought the advice of the Rector and the Leuven University Hospitals Executive Board, in accordance with the stipulations of the charter referred to in Article 30.6, if available. Upon this evaluation, the Board of Governors may propose to renew the term of office to the Board of Trustees.

Article 93 Term of Office

The Leuven University Hospitals Executive Director is appointed for renewable periods of maximum four years. If the term of office of the Leuven University Hospitals Executive Director finishes in the same academic year as the Rector's, the Board of Trustees may extend the Executive Director's term with one year.

If the Leuven University Hospitals Executive Director wishes to take part in the Rectorial elections, he/she must resign from his/her position at the latest on August 1 of the year prior to the Rectorial elections.

If a Rector's term of office finishes before the imposed term, the Board of Trustees may authorise deviation from this rule.

Chapter XV. Leuven University Hospitals Management Committee

Article 94 Authorities

The Leuven University Hospitals Management Committee is charged with preparing and implementing the Leuven University Hospitals policy and authorised to:

i. develop a general policy and a global strategy for the benefit of the Leuven University Hospitals Executive Board;

ii. implement the strategic options taken by the Leuven University Hospitals Executive Board;

iii. set up an appropriate Leuven University Hospitals organisational structure, including that of the Medical and Nursing Departments, which is submitted for approval to the Leuven University Hospitals Executive Board;

iv. facilitate maximum functional integration of the Leuven University Hospitals with the Biomedical Sciences Group, paying particular attention to academic and educational activities;

v. oversee the Leuven University Hospitals day-to-day and operational management;

vi. set up reliable internal quality, risk management and control systems;

vii. draw up action plans that comply with the KU Leuven Audit Committee's instructions, as ratified by the Executive Committee;

viii. draw up a draft budget proposal that will be submitted for approval to the Leuven University Hospitals Executive Board;

ix. draw up a draft balance sheet that will be submitted for approval to the Leuven University Hospitals Executive Board;

x. provide the necessary financial and management information as well as all other relevant information the Leuven University Hospitals Executive Board needs to optimally perform its duties;

xi. approve the clinical departments' strategies and policy plans and monitor their implementation;

xii. submit the items listed in the Law on hospitals for advice to the Medical Board.

Article 95 Composition

The Leuven University Hospitals Management Committee is made up of the following members:

i. the Leuven University Hospitals Executive Director, who also chairs the Leuven University Hospitals Management Committee;

ii. the Vice Rector of the Biomedical Sciences Group.

The General Secretary of the Leuven University Hospitals attends the meetings as secretary.

The Leuven University Hospitals Executive Board decides how the Management Committee is to be formed as well as on the provisions and terms of appointment, which it reports to the Board of Governors.

Chapter XVI. LRD Executive Board

Article 96 Authorities

Within the authorities delegated to it, the LRD Executive Board is authorised to:

i. draw up an LRD strategic plan, in an effort to implement the KU Leuven mission statement and Global Strategic Vision, which it submits to the Board of Governors for approval;

ii. set out LRD's general policy and partial strategy, having first sought the advice of the LRD Management Committee. The LRD Executive Board tunes with the University and with the Leuven University Hospitals.
The Executive Board elucidates this policy and this strategy to the Board of Governors, at least every six months and once on the basis of an annual report.

iii. supervise the implementation of the policy and the realisation of the strategic options taken by the LRD Management Committee;

iv. appoint and dismiss members of the LRD Management Committee in consultation with the LRD Executive Director, in accordance with the appointment provisions and terms laid down by the Management Committee, with the exception of the LRD Executive Director;

v. annually evaluate the other members of the LRD Management Committee, together with the LRD Executive Director;

vi. draw up a draft partial LRD budget and a draft balance sheet that will be submitted for approval to the Board of Governors;

vii. manage that part of KU Leuven's revenue delegated to LRD, by delegation of the Board of Governors;

viii. set out LRD's global staff policy regarding status, wages, and terms and conditions of employment;

ix. enter into agreements with third parties and take legal actions for LRD;

x. set up a system to evaluate its internal functioning.

Article 97 Composition

The LRD Executive Board has the following Divisions:

97.1. The Rector, the Vice Rectors Humanities & Social Sciences, Science & Technology and Biomedical Sciences, the Vice Rector for Research, the Managing Director and the LRD Executive Director, as long as they remain in office;

97.2. the Chair of the LRD Executive Board, appointed by the Board of Trustees upon nomination by the Board of Governors, itself having first sought the advice of the LRD Executive Board and having heard the Rector;

97.3. minimum one external member of the Board of Governors, appointed by the Board of Governors and with expertise in economic, financial and/or management matters or in the field of industrial management. The Board of Governors seeks the advice of the LRD Executive Board for these appointments, except if the appointee is the Chair of the Executive Committee;

97.4. two members appointed by the Board of Governors, one of whom is nominated by the Leuven University Hospitals Executive Board and one by the KU Leuven Association Board of Governors vzw;

97.5. maximum three added external members of the LRD Executive Board who are not on the Board of Governors and have gained expertise in the world of industry, appointed by the Board of Governors upon the advice of the LRD Executive Board;

97.6. the LRD General Manager, who attends meetings in an advisory capacity;

97.7. maximum three senior academic staff members representing the Divisions in an advisory capacity.

Article 98 Calendar and Meetings

The Rector and/or the Chair of the Board of Governors may have items added to the proximate LRD Executive Board meeting or have a special LRD Executive Board meeting convened.

Chapter XVII. LRD Executive Director

Article 99 Authorities

The Executive Director prepares and implements LRD's policy in accordance with these regulations and, within KU Leuven, he/she has statutory power of representation, judicially and extrajudicially, as laid down in Article 1.2.

Article 100 Appointment

The Board of Trustees appoints the LRD Executive Director, upon nomination by the Board of Governors, in consultation with the Rector and having first sought the advice of the LRD Executive Board.

Article 101 Evaluation

In the final year of each term in office, the LRD Executive Director is evaluated by the Board of Governors, having first sought the advice of the Rector and LRD Executive Board, in accordance with the charter referred to in Article 31.7, if available. Upon this evaluation, the Board of Governors may propose to renew the term of office to the Board of Trustees.

Article 102 Term of Office

The LRD Executive Director is appointed for renewable periods of maximum four years.

If the LRD Executive Director wishes to take part in the Rectorial elections, he/she must resign from his/her position at the latest on August 1 of the year prior to the Rectorial elections. If a Rector's term of office finishes before the imposed term, the Board of Trustees may authorise deviation from this rule.

Chapter XVIII. LRD Management Committee

Article 103 Authorities

The LRD Management Committee prepares and implements the valorisation policy.

Article 104 Composition

The following individuals become members of the LRD Management Committee by virtue of their office:

i. LRD Executive Director;
ii. LRD General Manager.

The LRD Executive Board decides who else becomes a member of the Management Committee and reports this to the Board of Governors.

Chapter XIX. Final Provisions

Article 105 Dissolution of KU Leuven

Only the Board of Trustees is authorised to order the dissolution of KU Leuven. In which case it will charge a college of liquidators with said dissolution.

The liquidators first pay off debts and reimburse charges on existing assets. Among other things, they guarantee the continued payment of pensions to former staff members, their widows/widowers and under aged children, and of compensations owed to staff members as a consequence of job loss.

They make sure that all provisos of restitution laid down in the deeds of gift are honoured.

They make sure that, in case of liquidation, assets which - under the legislation in force - have a specific destination, reach that destination.

Finally, the Board of Trustees will spend the remainder of the assets on whichever education or research goals it deems fit, possibly after having first sought the advice of a committee it has itself appointed.

Article 106 Interim Measures

106.1. Functions

Functions taken up after August 1, 2010 are taken up and end in accordance with the stipulations in these statutory regulations.

The Board of Trustees worked out the necessary interim measures for all current functions at its meeting of July 8, 2010.

Board of Trustees functions that cease to exist as part of these regulations because they no longer fit the newly created Body, end when the Rector’s term of office ends.

The current Vice Rector Kulak may continue to carry the title of Campus Rector until the academising University college degrees have been integrated into KU Leuven.

106.2. KU Leuven programmes on the Partner University Colleges campuses It has been decided that even if these campuses become part of KU Leuven’s estate, all stipulations regarding Management Bodies and Executive Positions as well as their authorities remain valid. The study programmes in question are the programmes that become part and parcel of the University in the academic year 2013-2014.

106.3. Number of Faculties

The Faculty of Engineering Technology and the Faculty of Architecture formally come into being on the first day of the academic year 2013-2014.

106.4. The Academic Director’s Office

The Board of Governors may impose interim measures for the first appointment of Academic Directors.

For three Academic Directors appointed by the Board of Governors on June 26, 2012, the following interim measures have been taken:

By way of derogation from Article 76septies it is not a requirement to be a KU Leuven senior academic staff member for a first appointment as Academic Director.

By way of derogation from Article 5.2. their term of office starts when they are appointed by the Board of Governors on June 26, 2012.

By way of derogation from Articles 5.1. and 53.1. the first term of office runs until July 31, 2017. If the Rector's term of office ends earlier, that does not automatically end this first term of office.

Because the office of Academic Director is immediately renewable twice, he/she can, by way of derogation from Article 53.2, be on the Joint Executive Board for maximum thirteen consecutive years as Academic Director.

106.5. Teaching Staff

In accordance with Article 79.1., teaching staff become members of the Faculty Council and the University Community on the first day of the academic year 2013-2014.

Article 107 Starting Date

These statutory regulations come into effect on July 10, 2012.

Appendix 4: Interview excerpt with an academic administrator (Senior manager)

The interview was conducted via skype and lasted approx. one hour. The conversational tone was informal. The respondent (RES) gave attention and consideration to the questions posed by the interviewer (INT) and provided detailed information on the issues under discussion. The interview was interactive and collaborative in nature.

INT:
We'll start with a general question: how did it happen that your Faculty decided to join the Lcie initiative?
RES:
It started with individual students. It was one of our students who heard about the Lcie initiative. She explored the opportunity to incorporate this initiative in her curriculum and then we tried to look within the Faculty how we can support this initiative. So, it is started really with an individual student with an interest in entrepreneurship that really triggered the faculty to think more about this initiative and to think more about implementing entrepreneurship within our curriculum.
INT:
How long did it take to expand this initiative within the Faculty? What were the problems by implementing it into the curriculum?
RES:
First, we had to look how it fits with the learning objectives we tried to achieve within our curriculum. And innovation and entrepreneurship were not really specified as a learning objective within our curriculum. We are part of the Biomedical Sciences group, so our curriculum is really medically oriented. We have two educational programs – one in rehabilitation sciences and educational program in kinesiology or physical education. We had to try to fit these learning objectives with the Lcie program or with some aspects of Lcie. We had to find a good solution. At the beginning, it was not a compulsory part of the curriculum but more on a voluntary basis. But now we have foreseen one specific course within our curriculum on entrepreneurship in practice, as we call it. It is still not the core element of the curriculum – it is a part of where a student can choose. It is also at the level of the master level, not bachelor level. Now it is more visible in the curriculum. When the student asked this question, it was almost four years ago. Now since last year, we have this specific course. It took about three years to really try to fit it into the curriculum. Also, the Lcie program

developed from specific courses to more the Lcie Academy with a package of courses, you have explored this, I think. So, it is a development within Lcie and the development within our own curriculum that we tried to fit.

INT:

If we talk about the University context in relation to your Faculty in particular, from your perspective, what factors promote or inhibit the implementation of large-scale change initiatives in your University?

RES:

First of all, I think the promoting factor is that the University is changing all the time. So, you have to be quite flexible in adopting and picking up new ideas. Especially within our Faculty which is a rather new Faculty – we are existing fifty-sixty years – it is not so old compared to the age of the University itself. Our field is developing also very quickly and therefore, we can also pick up new initiatives like Lcie or entrepreneurship quite quickly. We have also lots of young, not so traditional scientific fields. In that sense we are quite flexible and dynamic within our Faculty, but it can be different at other Faculties which have a more lasting history, which are more traditional. And it is a more inhibiting factor I think when the traditional thinking is quite strict. And the other inhibiting factor is that all the administration around it. To implement it you have to follow the different decision-making authorities to start implementing those changes and we have to be sure that we keep our learning objectives, i.e., we offer a Master's degree with clear learning objectives, we have to be sure that we fit educational responsibilities and so on. In this sense, curriculum change brings a lot of administration, it brings a lot of decision-making at different levels which might take several years before it is really implemented in a sense that it is really so that it becomes a part of our structure, a part of our curriculum.

INT:

One of the colleagues mentioned during the interview that the structure of the University allows to think out of the box. And you mentioned that the University is changing all the time. Could you tell me bit about the University structure? From your perspective, is the structure supportive to change?

RES:

Within our University the Faculties have a lot of autonomy. In fact, we can initiate changes from within our Faculty. Of course, the University has its educational policy, it has also a policy on innovation and so on, and we have to fit of course our programs and our work with these rather broad policy guidelines. But they are formulated quite broad that we have a lot of

autonomy to implement it or to develop it in a way that is very specific to our Faculty. And at the University level, there are a lot of supporting services, also, LRD that was the initiator of Lcie – they really try to support and to offer projects which can be implemented by the faculties. One of the initiatives that was really helpful for our Faculty was 'The Sports Tech' initiative also initiated by LRD – it called the Flanders Smart Hub and they really tried to develop a structure with companies, with the University, with different research entities within the University – and this was also supported by LRD. So, there are some really supportive structures at the central level within the University, but it really has to be driven from within the Faculty. The University just offers things and it depends on a Faculty whether to pick it up and to further develop. Every Faculty has the autonomy to develop it in a way that fits most its own policy and guidelines.

Appendix 5: Interview excerpt with a faculty member

The interview was conducted via skype and lasted approx. one hour. The respondent (RES) provided comprehensive answers to the questions asked by the interviewer (INT). The tone of the conversation was informal. It was a collaborative discussion of the issues that frame this doctoral research.

INT:
Lcie is a change initiative. I have conducted many interviews, and I know that many change initiatives are underway in your University. What are the main drivers for change in your University, from your perspective?

RES:
A typical aspect of my job as a professor is that we have a lot of autonomy. And a lot of initiatives in our University depend on individuals who are willing to use part of their time to support initiatives. I think our autonomy enables us to do that. If I really like an initiative and believe in it, I want to invest part of my time to support it. Here at the University if there is a need for change, you need key players that support the initiative. If they take the first steps and show the others that it is working, then others will follow. A lot of action is going on at the individual level. It could be a good initiative but if it is only top-down it would not work. When I think about Lcie it is a bit of a combination. Lcie started at the central level and thus could be seen as top-down initiative. But then there are people across the university who support the idea and try to implement this idea within the Faculties, so that the initiative starts to become bottom-up. I think in our university a lot depends on finding the right people to support the initiative. If an initiative won't get support of professors, then the initiative probably will not spread across the whole University or will be stuck at a certain level. At least, it is my view on how things are working.

INT:
I agree with you. I heard about it from many people whom I talked thus far. If I understood you correctly, in order to implement an initiative like Lcie, it is important to get the right people on board. From this perspective, the role of change agent is crucial. Would you agree with that?

RES:
Yes, I think so too. I think, as I said before, if I look at my own case: if I would not have met someone who was so convincing as the Lcie manager, I would not have probably been

involved in this initiative. Because he is not only motivating but he also gives a sense that he knows what he is talking about. It is not that he gives you work and does not do anything himself anymore. It is really a collaboration; it is thinking together about how to approaches things that they would work here at the Faculty – it is about co-construction of teams. A change agent is really very important. He does not only try to convince people, but he also has a support from policy makers. And it is very important that this centralised initiative gets support from the University.

INT:

You have used the word co-construction? What do you mean in this case? Could you elaborate a bit on this?

RES:

The term comes from team learning research actually. When we talk about co-construction, we mean that it is not just a person who gives some information to the other, it is an interaction between the individuals in which one gives the information and the other builds on that. It becomes a joint knowledge. One gives a piece of information and the other build on that – it is really a constructive conversation between people - you create something new together, i.e., not just merely exchanging information. So that I know things that he knows now, and he knows things that I know now - it is a co-construction in the sense - let's think about it together and building on each other's knowledge create something new.

INT:

From your perspective, what are the main obstacles for the implementation of Lcie or any other large-scale change initiative in your University?

RES:

I think the combination of existing structures. Our University has a lot of autonomy at the level of the different departments. It basically means that the initiative could take off at the department of sciences but not at all in the department of psychology. It is a way how our University is organized. That means that you could successfully implement an initiative in one department but not in the other. This is difficult for policy makers to handle because there might be some criticism that policy makers are supporting one department more than the other. Also, if I look at my department, there are professors who are conservative, i.e., who do not like to change. It has to do not only with individuals but also with culture. In general, there are people who are a bit resistant to change. And we are also sometimes a bit tired of changing. Because change brings a lot of work. And the general workload is high enough for most professors, sometimes too high. We have more and more cases of burn outs, also in our

department. So, the combination of additional work when we do not always know whether it will pay off and that some people are a bit conservative, a bit resistant to change as such. In our department we have discussed a lot - if higher education belongs to society, should education be broad and generally forming people or we should prepare students for a labour market position. Lcie is more directed to preparing students for work, and not all of my colleagues share this idea because education has merits in itself without direct connection to the labour market. In our department there are different ideas about the mission of higher education.

INT:

Yes, there has been a lot of discussion about the mission of higher education. You mentioned resistance to change and there are lots of discussions about how to overcome resistance, particularly in the university context. If we take Lcie as an example or if we take another change initiative implemented in your University, what has been done to overcome resistance to change?

RES:

I think they start with small steps. For example, first disseminate the information about Lcie to students. Then another small step, to have students taking part in a project organized by Lcie. The next step is to give students credits for participating in those projects. So, starting small and then trying to extend all that is a way we are approaching it at the moment. And also inform professors at the meetings when we are proposing new projects trying to give a lot of information and trying to make very clear that it is not something that is forced on them.

Appendix 6: A whole interview transcript

The interview was conducted via skype and lasted more than one hour. The respondent (RES) payed attention to details when focusing on the factual information. The respondent spoke clearly and persuasively and provided comprehensive and straightforward answers to the interviewer's (INT) questions. The collaborative character of the conversation was an essential feature of the interview process.

INT:
How did you find the questions? Were they easy to answer or were they a bit complicated?
RES:
Some of them were complicated with respect to the terminology I am normally used to work with. You may help me by clarifying some of these semantics related to higher education during our conversation. In essence, these elements will come up in the dialogue between the two of us allowing us to bring more details in the story and the reasons behind what we have done so far.
INT:
Absolutely. The first set of questions focuses on precursors to organizational change and development, i.e., the antecedent factors that facilitate or impede the implementation of a university-wide change initiative like L-C-I-E. My first question will be how your organizational context and institutional characteristics encourage University-wide change initiatives such as L-C-I-E?
RES:
We pronounce it as 'el-cee'. It is a kind of a brand name at KU Leuven nowadays. We kind of got away from spelling it as an acronym. We also spell it with only one capital, like a first-name person, which is a way of personificating the network.

Coming back to your question about the organizational factors or the local context, I will give you a few inhibiting factors and a few promoting factors. The key promoting factor for me would be a combination of societal change and entrepreneurship together with a significant drive we have experienced from students. And as you will learn later, as we discuss it in more detail, one of the cornerstones of the Lcie initiative is that it is really student-driven.

Let me go back to the history and time - it was actually among other things that increased awareness at the university level that entrepreneurship was evolving. There's also a big trend that universities are taking up a different place in society. Are you familiar with the theory of Wissema of the third generation or the fourth generation of universities?

INT:

No.

RES:

Let me make a note of that. I will send you some references that could be relevant for you. I will also send you some links later.

INT:

Thanks a lot.

RES:

On the one hand, we have societal change, and I can give you a concrete example: so, you have to ask yourself what the role of the university in these times of large movements is. Because any student can basically get any degree for a limited amount of money, the key question is what the future role of a university should be. We have been asking that question at the University level. At the same time, we have a societal trend showing that entrepreneurship is becoming more accepted, and this has to be put in perspective in the Western European countries where entrepreneurship is typically ranked not very high for many reasons. I will not go into too much detail but many of them relate to the socio-economic system which in Western Europe is very much different from the one in the US or in Asia. The average entrepreneurial mindset here is not very high. This relates to the initial context I mentioned – awareness at the University level about the changing context in society in combination with a strong drive from students. So, one of the key elements in the start of Lcie has been the fact that students sent some kind of policy paper to the University – '*hey, we are a few dozens of entrepreneurial students and we need something to change'*. The other component which I will add to that and which was also mentioned in this paper is the existence of the Technology Transfer Office (LRD). Have you done some research or are you familiar with what we do at LRD?

INT:

Sure.

RES:

LRD is one of the oldest tech transfer offices. We have had so far a very good track record in what we do. We have been ranked number one in the ranking of the most innovative

universities in Europe by a recent Thomson Reuters study. It is a cumulative result of the fact that our offices have been existing for a long time, and as such we had time to find a suitable place within the ecosystem. Also, we had good sponsors at the Rector's level in the past. So, it is the combination of various factors and historical reasons. But in the end, we have a very strong tech transfer office at the University. We have a very strong track record for creating spin-off companies, not only at the quantitative level but also at the qualitative level. Our spin-offs have typical "survival rates" of the order of 85% which is very high. The reason why it is so high is not because we do not want to take any risk but because we have other ways of doing research valorization e.g. by doing research consultancy via collaborative projects and so on. Hence, other ways doing research commercialization are possible not through a spin-off company but also through other mechanisms that are also being supported by the tech transfer office. It is only when we feel that the start of a new company is the most suitable route for valorization, that we pursue that route. We have also a local investment fund called the Gemma Frisius Fund. So, it is through the combination of all these various factors that we have a very strong track record in setting up start-up companies.

Putting those things together: the context has been changed, and there was awareness at the university level; there was a drive from students who discovered that there has been a very long and a very good track level of start-up companies, so that the students said, '*OK we also want something like this'*.

And now for one of the inhibiting factors – and I mean 'inhibiting' not at the personal level but at the institutional level: if you look at the core missions of the University – we have three missions: the central task is education, the second one is research and the third one is what we call service to community or exploitation of research. LRD is hundred percent engaged in the third pillar, i.e., exploitation of research or service to community. To accommodate for these tasks, we have a complex institutional structure consisting of Faculties, whereby the Faculties are typically responsible for education. Then we have research departments that are interwoven with the Faculties, they are responsible for research. And then, we have a centralized office dealing with the exploitation of research. Thus, we have a multidimensional hierarchical structure in the University.

INT:

When you said 'a centralized office', did you mean LRD or what office did you mean?

RES:

Yes, LRD is one of the central offices, 'central' in the sense that we do not belong to a particular faculty. We are at University level similar to e.g. the accounting department. But it is not a decentralized system when we have LRD staff in the Faculties because we care of any type of research – it can be humanities, it can be sciences, it can be biomedical sciences. The point is that these different roles or different tasks, i.e., education, research and services, take place via different systems within the University. So, we have Faculties responsible for education, the departments or the research groups responsible for the research strategy, and we have the tech transfer office dealing with exploitation. Of course, there are many interactions between those people.

I'll give you an example of an inhibiting factor: it is not the core mission of the tech transfer office to be involved in education and inspiration or let's call it: "the creation of awareness for entrepreneurial behavior", which is a collateral thing that we have to do in order to stimulate entrepreneurship of the researchers. So, the inhibiting factor was, in essence, that we have a very strong record of exploitation of research from staff on one hand, but we have never been involved in the education of students on the other hand. Of course, there are some courses on entrepreneurship in certain Faculties, but most are more at an academic level and not at a practical level. And students said – *'OK, we see that the University is doing really well in the exploitation of research. There are a lot of supporting mechanisms, i.e. investments funds, research parks, and other supporting factors but students do not have access to these things*.'

INT:

Did I understand you correctly that it was the first time when LRD became involved in education initiatives?

RES:

Well, we have been involved in education in the past. For instance, we have set up a doctoral school course, i.e., a course dedicated to doctoral students. But it is important to understand that doctoral students in our university are considered as employees; they are not considered from their legal status as "students". Doctoral students get scholarships from our University; hence, they get some kind of a wage. For that reason, they are considered similar to other researchers or faculty members or staff. In that sense, we already provided several types of entrepreneurial programs, master classes among these things, but mainly focused on researchers, that is: people with PhDs or post-docs who develop research and work with us to find out whether creating a new company would be the best way to bring it to the market.

INT:

This is a semi-structured interview, so we need not to follow exactly the list of questions that I have sent you in advance. Speaking about inhibiting factors: how did you overcome resistance to change of faculty members by implementing Lcie?

RES:

In essence, the inhibiting factor – and it is not at the personal level of people - we came across many people who were very constructive in this process – but if you look at the way how the university is set up, within our system and I talked to other universities as well, typically Faculties have a high level of autonomy. KU Leuven is almost six hundred years old. We started in the Middle Ages basically with four Faculties. Now we have sixteen Faculties but, in essence, the organizational structure of the University has not significantly changed over time. It means that we still have the structure, which is linked to mono disciplines, e.g., Engineering Faculty, Science Faculty. This is good, of course, but if you look at the concept like entrepreneurship, in my opinion, it should not be attributed to a certain Faculty. So, one of the inhibiting factors was that mentally and semantically, people often associate entrepreneurship with the Faculty of Business and Economics. Obviously, the typical entrepreneurial intent with students and staff is higher at this Faculty. This is the reason why people think that there is a correlation, but it is not a one-to-one correlation. Entrepreneurship should be existing in the mentality in any type of Faculty.

So, one of the inhibiting factors was that when we started the Lcie initiative, the name was different. The first name was LCEE, i.e., the Leuven Center for Entrepreneurship Education. The initial goal was indeed to bring the entrepreneurial courses and the entrepreneurial expertise throughout the University within one entrepreneurship center in a kind of, what e.g. Cambridge has been doing with its Business School. Many other universities we have looked at, have some kind of Business School or an Entrepreneurial College or an Entrepreneurial Center associated with it. This was the first approach that we have taken at KU Leuven by setting up such an initiative. What we discovered is that we got a lot of support from the Faculty of Business and Economics obviously, but we got limited support from the other Faculties because they perceived it as some kind of ‘stretching’ of only one Faculty and not their Faculties. But if you look at the typical spin-off portfolio we have, most of the spin-off companies actually do not come from the Faculty of Business and Economics, but they come from the Engineering Faculty, or the Biomedical Science related Faculties. Thus, there was a

kind of a disconnect between the way we wanted to approach the problem and the way it was perceived by different Faculties.

INT:

One of my questions concerns the role of language in shaping the Lcie-related change processes. You mentioned that language was important so that you even had to rename the initiative in order to cope with the mentality of faculty members who did not belong to the Faculty of Business and Economics. Did I understand you correctly?

RES:

Partly, in the sense that it is more than just the language, it is the complete approach. What happened during the first one or two years when we set up the initiative - we did discover that we got a strong support from one Faculty but not from other Faculties. We meant to develop something University-wide, but we discovered that the support was strong with one Faculty but not that strong with other Faculties. We came to a decision to almost stop the entire initiative because the overall support was not high enough at the various Faculties involved.

But let me finish on the inhibiting factors first. Because entrepreneurship is something which is not linked to a Faculty it was crucial that we get support from all the Faculties involved. And because there is a high level of autonomy of the various Faculties, it was really difficult to create a new structure which is not within the Faculty. Just to give you a typical example. All the financing schemes at the University are in some way linked to education. Faculty gets money, and the money is allocated based on a very complex scheme of a number of hours a professor is teaching at the Faculty, a number of students they coach and so on. This means that there are almost no incentives for professors to do things which are outside their Faculty. It was the key challenge for us to create a University-wide structure which is not inhibited by this very complex and often hidden mechanism of money distribution over the Faculties. We had to create a structure outside the existing money streams to avoid a huge political "compromise" among the Faculties where each would be a "boss", because reporting to sixteen "bosses" would not have been a workable solution.

Coming then to the point of language - when we came to the point of almost stopping the initiative, we went completely to the basics. We said, '*OK, setting up something new requires an entrepreneurial attitude. How would an entrepreneurial person or a group of people approach such a wicked problem?'* A complex problem with many facets is called a "wicked problem". The first thing we said was: '*we have to involve all our stakeholders'*. From a

business perspective, you have to work out and develop projects aimed at your clients or customers. The key stakeholders in this process were students. The big problem was that we did not involve students in what we wanted to achieve, although the overall objective of the concept was to create a cultural change in the University to the benefit of all students.

INT:

Cultural change, you said?

RES:

Yes, cultural change or mindset change when it comes to the entrepreneurial attitude. What we did at some point: we talked directly to the students. This is something that you should add to the positive institutional factors of KU Leuven: we have a strong participatory culture of student organizations. To give you a concrete example. Many of the Faculties have student organizations, e.g., the Engineering Faculty has a student body of engineering students. It is very big – they function almost like a company, i.e., they generate revenues, they organize job fairs, they participate in the University's Faculty Education Committees. In contrast to some other universities, where students typically limit their activities to students' aimed activities like organizing parties or may be distributing the course materials. In this University context, we have a long tradition of students' participation in the University's decision-making bodies as well. By working with those students, we first wanted to check whether the idea of bringing more entrepreneurship in the curriculum was relevant for the students. And they agreed it was. Secondly, because they had already existing structures in place, i.e., the student bodies, students from different Faculties knew each other fairly well. So, the complexity of working across Faculty boundaries or across disciplinary boundaries was significantly lower at the student body level. Students do not need to compete for money in a way as faculty members typically compete for student numbers, because the money or output is driving the activities they do. Students are different. In a very short time, we had a kind of consensus by informing the student organizations around the University, not all of them, but a significant amount of the student organizations; especially, of the biggest Faculties, like the engineering students, the students of the Faculty of Economics and Business, the medical students, the bioengineering science students. Within a couple of weeks, we got a buy-in of eight organizations. And with this small group of people we put together we could reach almost 60% of the university population which is a really an efficient mechanism to get a change process started.

Again, regarding the language: we also completely changed the approach we had done so far and the choice of the name 'Center' reflected this also. A 'center' is really something that is top-down driven, something that centralizes things, and this "centralization" was semantically the wrong approach to take. The first name was the Leuven Center for Entrepreneurial Education. The concept and connotation of "Center" led people to the impression that we wanted to centralize things, that we wanted to take control of something outside their reach. And what we said at one of our really important meetings at some point was: *'let's completely change the way we approached it and go into what we call a community'*. We changed the paradigm of a top-down approach mentally. So, our epiphany moment was that we were implementing the initiative top-down while we were proclaiming that we wanted to do it bottom-up. The way to do it bottom-up was to forget completely the University hierarchy involved and go to the basics, to the students themselves, and then work out a way into the systems. It is a funny anecdote that I will tell you. We had already a logo designed at one point in time, based on the acronym LCEE, and we did not want to give up that logo. The trick was to change the 'C' designating a 'Center' to 'Community' so that we could keep the acronym anyway. The Leuven Center for Entrepreneurship became the Leuven Community for Innovation driven Entrepreneurship.

So, these were the key constituencies: the awareness about societal changes at the University level, openness to do something about it; the drive from the students; and the changing mindsets which we discovered along the way going from a kind of top-down approach to a completely bottom-up approach. And we used student leverage in the faculties to get things on the agenda at a very fast pace because the student bodies - which is again one of these supporting factors - are represented in the bodies of the Educational Committees of the Faculties. When those engineering students say – *'we want to put entrepreneurship high on the agenda'* – it was not me speaking, it were the engineering students speaking.
And then the last point which I want to make which is also a positive factor: in my current role in the tech transfer office I was perceived as a neutral party. If I would be linked to a faculty, I would be biased or at least perceived to be biased, maybe I could have even had a hidden agenda. In this case, nobody could proclaim anything about the hidden agenda because what I was doing came from the independent part of the university, launching an initiative with the students and for the students with the aim of doing something which was meant to be for all the Faculties, i.e., University-wide. The benefit was that because I was working with many different student organizations, I could use the element of competition in people to the

benefit of the process. Because students of one Faculty will convince their Faculty to take a step, we could of course use this information at the other Faculty, to say, '*do you know that this faculty is already doing this*?' And since Faculties do not want to be perceived as a lazy Faculty or traditional school faculty, we could accelerate things at the higher pace than if we would just have left it to the Education Committees.

Thus, it is a combination of students' drive, awareness, the way that we have tackled this, the way we have been able to stay away from the existing processes but using them in a correct way. We always said, *'we don't want to be perceived as anarchists at the University – we will work with all the structures, but we don't want to create structures just for the purpose of creating new structures because we already have too many structures involved'*. We had a very difficult time to convince people because it had to do with credibility and accountability. Of course, if you are ex officio, if you are given a mandate to do something you will be judged by the way you are fulfilling the mandate. In our way, at the beginning, we really did not have a mandate. We had a project, we had human capital, i.e., people surrounding us. And even today we do not really exist in the organizational structures of the University. If you look at the organizational structure of Faculties and committees, there is no official mentioning of Lcie. Of course, we have a group of people, and we are a kind of endorsed but the level of endorsement goes at the human capital level and not at the institutional level. That was a radical change in a way we approached it. Of course, we had discussions at the Academic Board. We created a lot of papers to convince them that this initiative is good. There were written processes endorsing what we did but it was different compared to creating an organizational structure which is presented in the organigram of the University that you can find in the internet, for instance. This combination of the factors let us to reach the point where we are today.

INT:

Was Lcie a planned initiative from the point of view that you deliberately decided to implement developmental change at your institution, or was it a kind of an evolutionary initiative for continuous improvement?

RES:

Was Lcie a planned or an emergent initiative? A combination of both. On the one hand, it was planned. There were also some personal parameters involved in the sense that it is a kind of coincidence of many things coming together. I was in a position to find opportunities within the University because the previous job which I had was fading out. I had to look for other

ways to filling my responsibilities. During this process I learned that there used to be a vacancy of a project coordinator for launching an entrepreneurial centre. They never filled this vacancy because nobody was found with the suitable profile at this point. The position was revived in one, or two or may be three years. Many people mentioned that I could do what we tried to do three years ago. I applied for this position, got selected and it all started. So, it was a planned initiative to do something, and the vacancy presupposed the conceptualization of an "Entrepreneurial Centre". The idea from the start was to create an Entrepreneurial Centre coupling all the initiatives on entrepreneurship within the University, e.g., the coaching sessions organized for the researchers by the technology transfer office; the initiatives of professors starting to introduce entrepreneurship in the curriculum. Because we have a good helicopter view from our role as tech transfer employees, we saw that all these individual initiatives were isolated. As 'outsiders' we reckoned that it would be better for the university if we could combine their strengths and align these efforts. Thus, it was in the planned part that we wanted to do something about it. We executed this plan for about two years. Then we reached the epiphany moment when we discovered that the way we had been approaching it was not the right way. After realizing this, the entire process was shifted towards a more entrepreneurial way. We said, *'we involve the students more'*. So, we created *a 'community'*.

One of the side effects - you remember that we were operating outside of the Faculty structures which was a good thing because it allowed a lot of freedom - was also a limiting factor in the sense that we had almost no budget. And without financial means you cannot really go forward. But - and it is my opinion - scarceness triggers creativity. I see many initiatives that fail although they are very well funded, and I do not mean that in a bad way. But if I would have gotten five hundred thousand euros to start this project, maybe I would have done a big thing - I do not know. But it would have looked completely different, and I would certainly not have involved students in the way that we have done it here. Because working with students was kind of a creative approach, an attempt to find buy-in within the student population. We had to really be creative and grow means to create a story line or a vision that can only be materialized if the stakeholders involved believe in it. In essence, when you start up an initiative – like we see for our spin-offs - you start with a vision and you involve the stakeholders in the vision. But to realize the vision you have to make a financial plan which often at the beginning requires a period when you have to do investments. You have to invest in certain things to develop a product, a prototype whatever to the point when

you can grow. And we said, why not to use the same mindset to start our own Lcie initiative. So we said, *'OK, we have almost no money, but we don't need money – we need resources, we need people to work with us. We need to create a story, so that people believe that entrepreneurship is a good thing for them'*. And we started creating a community of entrepreneurial people.

Are you familiar with the theory of Rogers? If you want to start something new, there are always some "early adopters", the innovators in a population of so many different people. There will always be a few people that will believe your story, they will want to work with you, and that's an opportunity. What we did: we activated the early adopters and the innovators in our group of stakeholders – with students, with the Faculties, with the professors. There were many entrepreneurial people who wanted to take some of their valuable time because they believed in this story. And this is a kind of a bootstrapping process. By working with some students, some professors, we discovered that the way for institutional change was to become a "higher education MVP" [red: minimal viable product] platform. Because if you want to change something you can either do it top-down or you can spend much time discussing all the pros and cons with everyone who has to have their say and then you can launch it. But the entire process of developing something new can be so long that by the time that you launch it you have already been left behind because the context has changed. So we said, '*let's do what entrepreneurial people would do'*. What they will do: they will create a prototype or an MVP (minimal viable product). We did some kind of experiments, i.e., we developed courses or course/project formats which had a lot of default problems but could demonstrate that by bringing good people together we could achieve success. By activating this network, we discovered that we could do a lot of interesting things that would normally take longer time if you leave it up to the faculties. Because if you want to create a new course at a certain Faculty, there are many things that you have to take into account, e.g., legal aspects and liability; it has to be available for all students and it has to be comprehensive. But if you do it as a single project for only ten students, if you have an agreement with a professor, you can learn from it. So, we used a kind of an iterative approach to implement it.

INT:

Talking about the implementation of this initiative: was it a linear process that took place at the institutional level - are you familiar with Kurt Lewin's change management approach (unfreeze-change-refreeze), i.e., the preparation phase, the change phase, and the initialization

phase? Or would you say that it was more like a cyclical implementation, a kind of a social process that took place at the individual level?

RES:

That's a tough question. It was not a black and white thing, but I would tend more towards a cyclical version. It is a combination for me of a cyclical and iterative type of approach in a sense of the turnaround time of a cycle. Because basically what you do is: you inject information in the system and the system will do its thing: it will discuss, it will come back with feedback, and you will iterate on that – that is the sort of cycle you refer to. I think one of the things we did was: we created a new structure of people consisting of mainly the innovators and worked with them. We therefore had a very short iteration cycle. As mentioned, I could have taken the same approach by working with faculties but if you submit a project or a proposal to a faculty you will be depending on the inertia linked to a typical faculty decision-making process which is very long. That's why we stayed completely outside of these decision-making processes. We approached early adopters and those were quick to respond – *'let's see what will happen'*. But the people involved included also those up in higher levels, i.e., we had deans and department heads as well as professors. We found people who were really supportive and who could put things higher on the agenda than what normally could have been done if you would follow a typical approach. That's a kind of the way you build an entrepreneurial culture by working with your allies within your company structure. If you look at entrepreneurship: you have to have a support at the CEO level, you have to have the openness, i.e., the freedom to explore whatever your needs are while still keeping to the direct line of the people at the CEO level, and then, you have to work your way throughout the organizational structure. That's kind of using the politics but in a different way. Based on the intrinsic values of the project, you want to achieve the milestones and key objectives. That's kind of the thing we did. Because the project was launched without any funding, we had to create an entrepreneurial DNA and build it into the way we worked.

I'll give you an example: at some point in time, we decided that it would be good to have our own incubator – a place for students who want to be entrepreneurial. At that time, there was no place where students could come together to work on their entrepreneurial projects. Normally we would have to look for University funding or ask for an empty building. But the university did not have a spare building that could be used for our purposes. And it was also a very positive factor that we should add to the positive things: we have a local government which is really supportive of entrepreneurship. We talked to them, and the local government

(the local province) said, '*yes, we want to support entrepreneurship'*. We believe in your story and we want to make a small budget available for you to start this student incubator project. We made a project proposal, we got a grant, a limited grant of course but enough to get us started to do something. Together with the support of students, together with the small grant of the local province, together with a bit of extra funding from the teach transfer office, we were able to put together a small starting capital. It was big enough to do something but small enough to keep us on the edge. We always had to convince other people to help us. That was our entrepreneurial DNA at work.

So, we needed an incubator building, and we found such a building. An older part of this building was vacant for a long time since it had not been maintained very well. So, it was a cheap solution for us to rent the old part of this building, but the building needed renovation. The university wanted to help us, but there was no budget for a complete renovation. Since we could not afford to pay the amount of money required in an official way, we talked to students, and together, we designed our own blueprints. We told the landlord that we could upgrade his building if he would pay the material costs. We leveraged a bit of budget that way. And in less than eight weeks we did the entire renovation of the incubator building together with several motivated students. We were entrepreneurial. And this created a mindset among the students of: *'hey, these people are really entrepreneurial'.* So, you foster the culture of what you want to achieve with the student population, and that is important.

INT:

From your perspective, what transactional factors were crucial to creating the climate for change by implementing Lcie?

RES:

Transactional factors? In the time when we were starting the initiative a new policy plan was put in place at the University level. The policy plan highlighted the attention towards entrepreneurship, and it was important. Secondly, there was something very important in this plan, i.e., the "disciplinary future-self" concept. What we discovered was that, on the one hand, we had the vision and the strategy - basically the leadership told the entire organization that we need to put more emphasis on entrepreneurship. On the other hand, the plan highlighted the approach to change which was similar to the one used by implementing Lcie, i.e., from the top-down perspective to the bottom-up perspective. Let me try to explain this with an analogy. When I was a student of this university and wanted to apply for engineering, I received from the University a well-defined package of courses making up the study

curriculum. Nowadays, students are in a situation when they can apply for a very flexible program. Everything is digital, and students can start creating themselves majors and minors, so there is a lot more flexibility. In essence, we are going to implement a profound change in higher education institutions where the locus of control shifts from the future plans of the university towards the individual. The University is expecting, and this is related to the concept of the future self, that people should be made more responsible for the choice of what they want to achieve in life, and then create a pathway based on their vision of the future. The university becomes more and more a facilitating entity. It is indeed the same type of change, i.e. from top-down – 'we, as the University, decide' versus 'we, as the University, provide support to your decision'. I remember when I started the initiative I talked to the people from the administration, and we had to make a very important paradigm shift, also at the transactional level. The paradigm that we were working within when we started - at least this is my personal perception of it – was essentially linked to the very strong reputation of KU Leuven. If you look at the reasons why students typically study at KU Leuven, it is because the degree is highly valued by society, or at least, students perceive it to be. It means that students do not really enter the university to be entrepreneurial; rather, they come to get a good degree which they think will lead them probably to a good future because the degree is worth a lot of money. The paradox is that when the students actually get their degrees, they discover that 'I am like one of the five hundred of my class and I am not different in any way'. That's why it is important that we bring the responsibility factor to the individual. When we talked to the people from the administration and the people supporting the educational staff – because those people were basically being put in place to operationalize the vision of the University about these policies – and asked them 'What do you think is our job as a University?', they brought in this paradigm: our mission is to support students to get good degrees. And we said 'no' - we have to change this paradigm in a way that our role as a university is to help people to realize their own future. The degree is just one of the components, and education should be more than that.

I'll give you one more practical example. When we first raised the question - suppose you are an entrepreneurial student and you want to become an entrepreneur during your studies – what do we have for such students? The answer was: "we have nothing". So we said, '*how is it possible that we, as the University - and the University is the last step for younger people to move into the labor market – do not offer an option for people who want to create their own career while our job is to prepare people for life after graduation?'* It is this insight that we

put into the policy documents indicating that we are able to take the next step or the next level to create the culture supporting entrepreneurship.

INT:

Thank you very much for the interview.

Appendix 7: Example of coded interview transcript

Interview units	Initial codes for the data
We pronounce it as 'el-cee'. It is a kind of a brand name at KU Leuven nowadays. We kind of got away from spelling it as an acronym. We also spell it with only one capital, like a first-name person, which is a way of personificating the network.	- distinctive verbal identity of the change initiative
Coming back to your question about the organizational factors or the local context, I will give you a few inhibiting factors and a few promoting factors. **The key promoting factor for me** would be a combination of societal change and entrepreneurship together with a significant drive we have experienced from students. And as you will learn later, as we discuss it in more detail, one of the cornerstones of the Lcie initiative is that it is really student-driven.	- effects of societal change and entrepreneurship - strong students' desire and commitment
Let me go back to the history and time - it was actually among other things that increased awareness at the university level that entrepreneurship was evolving. There's also a big trend that universities are taking up a different place in society. On the one hand, we have societal change, and I can give you a concrete example: so, you have to ask yourself what the role of the university in these times of large movements is. Because any student can basically get any degree for a limited amount of money, the key question is what the future role of a university should be. We have been asking that question at the University level. At the same time, we have a societal trend showing that entrepreneurship is becoming more accepted, and this has to be put in perspective in the Western European countries where entrepreneurship is typically ranked not very high for many reasons. I will not go into too much detail but many of them relate to the socio-economic system which in Western Europe is very much different from the one in the US or in Asia. The average entrepreneurial mindset here is not very high. This relates to the initial context I mentioned – awareness at the university level about the changing context in society in combination with a strong drive from students. So, one of the key elements in the start of Lcie has been the fact that students sent some kind of policy paper to the university – '*hey, we are a few dozens of entrepreneurial students and we need something to change'.*	- the changing role of universities - a growing interest to entrepreneurship - discussions at the University level
The other component which I will add to that and which was also mentioned in this paper is the existence of the Technology Transfer Office (LRD). LRD is one of the oldest tech transfer offices. We have had so far a very good	- expertise in technology transfer (LRD)

track record in what we do. We have been ranked number one in the ranking of the most innovative universities in Europe by a recent Thomson Reuters study. It is a cumulative result of the fact that our offices have been existing for a long time, and as such we had time to find a suitable place within the ecosystem. Also, we had good sponsors at the Rector's level in the past. So, it is the combination of various factors and historical reasons. But in the end, we have a very strong tech transfer office at the University. We have a very strong track record for creating spin-off companies, not only at the quantitative level but also at the qualitative level. Our spin-offs have typical "survival rates" of the order of 85% which is very high. The reason why it is so high is not because we do not want to take any risk but because we have other ways of doing research valorization, e.g., by doing research consultancy via collaborative projects and so on. Hence, other ways doing research commercialization are possible not through a spin-off company but also through other mechanisms that are also being supported by the tech transfer office. It is only when we feel that the start of a new company is the most suitable route for valorization, that we pursue that route. We have also a local investment fund called the Gemma Frisius Fund. So, it is through the combination of all these various factors that we have a very strong track record in setting up start-up companies. Putting those things together: the context has been changed, and there was awareness at the University level; there was a drive from students who discovered that there has been a very long and a very good track level of start-up companies, so that the students said, '*OK we also want something like this'*.	
And now for **one of the inhibiting factors** – and I mean 'inhibiting' not at the personal level but at the institutional level: if you look at the core missions of the University – we have three missions: the central task is education, the second one is research and the third one is what we call service to community or exploitation of research. LRD is hundred percent engaged in the third pillar, i.e., exploitation of research or service to community. To accommodate for these tasks, we have a complex institutional structure consisting of Faculties, whereby the Faculties are typically responsible for education. Then we have research departments that are interwoven with the faculties, they are responsible for research. And then, we have a centralized office dealing with the exploitation of research. Thus, we have a multidimensional hierarchical structure in the University.	- a complex, multidimensional organizational structure - exploitation of research as the core mission of LRD - education as the core mission of Faculties

Yes, LRD is one of the central offices, 'central' in the sense that we do not belong to a particular faculty. We are at University level similar to e.g. the accounting department. But it is not a decentralized system when we have LRD staff in the Faculties because we care of any type of research – it can be humanities, it can be sciences, it can be biomedical sciences. The point is that these different roles or different tasks, i.e., education, research and services, take place via different systems within the University. So, we have faculties responsible for education, the departments or the research groups responsible for the research strategy, and we have the tech transfer office dealing with exploitation. Of course, there are many interactions between those people.	- LRD as a central unit - difference in responsibilities ascribed to LRD, Departments and Faculties
I'll give you an example of **an inhibiting factor**: it is not the core mission of the tech transfer office to be involved in education and inspiration or let's call it: "the creation of awareness for entrepreneurial behavior", which is a collateral thing that we have to do in order to stimulate entrepreneurship of the researchers. So, the inhibiting factor was, in essence, that we have a very strong record of exploitation of research from staff on one hand, but we have never been involved in the education of students on the other hand. Of course, there are some courses on entrepreneurship in certain faculties, but most are more at an academic level and not at a practical level. And students said – *'OK, we see that the University is doing really well in the exploitation of research. There are a lot of supporting mechanisms, i.e., investments funds, research parks, and other supporting factors but students do not have access to these things*.'	- no previous involvement in education of students by LRD - students' demands regarding practical skills for entrepreneurship
Well, we have been involved in education in the past. For instance, we have set up a doctoral school course, i.e., a course dedicated to doctoral students. But it is important to understand that doctoral students in our university are considered as employees; they are not considered from their legal status as "students". Doctoral students get scholarships from our university; hence, they get some kind of a wage. For that reason, they are considered similar to other researchers or faculty members or staff. In that sense, we already provided several types of entrepreneurial programs, master classes among these things, but mainly focused on researchers, that is: people with PhDs or post-docs who develop research and work with us to find out whether creating a new company would be the best way to bring it to the market.	- LRD's involvement in developing doctoral entrepreneurship programs
In essence, **the inhibiting factor** – and it is not at the personal level of people - we came across many people	- autonomy of Faculties

who were very constructive in this process – but if you look at the way how the university is set up, within our system and I talked to other universities as well, typically Faculties have a high level of autonomy. KU Leuven is almost six hundred years old. We started in the Middle Ages basically with four Faculties. Now we have sixteen Faculties but, in essence, the organizational structure of the University has not significantly changed over time. It means that we still have the structure, which is linked to mono disciplines, e.g., Engineering Faculty, Science Faculty. This is good, of course, but if you look at the concept like entrepreneurship, in my opinion, it should not be attributed to a certain faculty. So, one of the inhibiting factors was that mentally and semantically, people often associate entrepreneurship with the Faculty of Business and Economics. Obviously, the typical entrepreneurial intent with students and staff is higher at this Faculty. This is the reason why people think that there is a correlation, but it is not a one-to-one correlation. Entrepreneurship should be existing in the mentality in any type of Faculty.	- organizational structure linked to mono disciplines - association of entrepreneurship with the Faculty of Business and Economics
So, **one of the inhibiting factors** was that when we started the Lcie initiative, the name was different. The first name was LCEE, i.e., the Leuven Centre for Entrepreneurship Education. The initial goal was indeed to bring the entrepreneurial courses and the entrepreneurial expertise throughout the University within one entrepreneurship centre in a kind of, what e.g. Cambridge has been doing with its Business School. Many other universities we have looked at, have some kind of Business School or an Entrepreneurial College or an Entrepreneurial Centre associated with it. This was the first approach that we have taken at KU Leuven by setting up such an initiative. What we discovered is that we got a lot of support from the Faculty of Business and Economics obviously, but we got limited support from the other Faculties because they perceived it as some kind of 'stretching' of only one Faculty and not their Faculties. But if you look at the typical spin-off portfolio we have, most of the spin-off companies actually do not come from the Faculty of Business and Economics, but they come from the Engineering Faculty, or the Biomedical Science related Faculties. Thus, there was a kind of a disconnect between the way we wanted to approach the problem and the way it was perceived by different Faculties.	- 'Centre for Entrepreneurship Education' as the initial name for the initiative - much support from the Faculty of Business and Economics - limited support from other faculties - approach-related perception by different faculties
Partly, in the sense that it is more than just the language, it is the complete approach. What happened during the first one or two years when we set up the initiative - we did discover that we got a strong support from one faculty but not from other Faculties. We meant to develop something	- the implementation approach reflected in the name 'Centre'

University-wide, but we discovered that the support was strong with one Faculty but not that strong with other Faculties. We came to a decision to almost stop the entire initiative because the overall support was not high enough at the various Faculties involved.	- resultant low support from Faculties - thinking about the cessation of the initiative
But let me finish on **the inhibiting factors** first. Because entrepreneurship is something which is not linked to a Faculty it was crucial that we get support from all the Faculties involved. And because there is a high level of autonomy of the various Faculties, it was really difficult to create a new structure which is not within the Faculty. Just to give you a typical example. All the financing schemes at the University are in some way linked to education. Faculty gets money, and the money is allocated based on a very complex scheme of a number of hours a professor is teaching at the Faculty, a number of students they coach and so on. This means that there are almost no incentives for professors to do things which are outside their Faculty. It was the key challenge for us to create a University-wide structure which is not inhibited by this very complex and often hidden mechanism of money distribution over the Faculties. We had to create a structure outside the existing money streams to avoid a huge political "compromise" among the Faculties where each would be a "boss", because reporting to sixteen "bosses" would not have been a workable solution.	- a challenge of developing a University-wide structure outside the existing finance streams
Coming then to the point of language - when we came to the point of almost stopping the initiative, we went completely to the basics. We said, '*OK, setting up something new requires an entrepreneurial attitude. How would an entrepreneurial person or a group of people approach such a wicked problem?'* A complex problem with many facets is called a "wicked problem". The first thing we said was: '*we have to involve all our stakeholders'*. From a business perspective, you have to work out and develop projects aimed at your clients or customers. The key stakeholders in this process were students. The big problem was that we did not involve students in what we wanted to achieve, although the overall objective of the concept was to create a cultural change in the University to the benefit of all students.	- entrepreneurial approach towards implementing Lcie - the involvement of students as the key stakeholders
Yes, cultural change or mindset change when it comes to the entrepreneurial attitude. What we did at some point: we talked directly to the students. This is something that you should add to **the positive institutional factors** of KU Leuven: we have a strong participatory culture of student organizations. To give you a concrete example. Many of	- mindset change - a strong and extensive network of student organizations

the Faculties have student organizations, e.g., the Engineering Faculty has a student body of engineering students. It is very big – they function almost like a company, i.e., they generate revenues, they organize job fairs, they participate in the University's Faculty Education Committees. In contrast to some other universities, where students typically limit their activities to students' aimed activities like organizing parties or may be distributing the course materials. In this University context, we have a long tradition of students' participation in the University's decision-making bodies as well. By working with those students, we first wanted to check whether the idea of bringing more entrepreneurship in the curriculum was relevant for the students. And they agreed it was. Secondly, because they had already existing structures in place, i.e., the student bodies, students from different faculties knew each other fairly well. So, the complexity of working across faculty boundaries or across disciplinary boundaries was significantly lower at the student body level. Students do not need to compete for money in a way as faculty members typically compete for student numbers, because the money or output is driving the activities they do. Students are different. In a very short time, we had a kind of consensus by informing the student organizations around the University, not all of them, but a significant amount of the student organizations; especially, of the biggest Faculties, like the engineering students, the students of the Faculty of Economics and Business, the medical students, the bioengineering science students. Within a couple of weeks, we got a buy-in of eight organizations. And with this small group of people we put together we could reach almost 60% of the University population which is a really an efficient mechanism to get a change process started.	- participatory culture of student organizations - a long tradition of involving students in decision-making - support to Lcie from students - students' organizations as a strategic lever for overcoming boundaries across disciplines and faculties
Again, **regarding the language**: we also completely changed the approach we had done so far and the choice of the name 'Centre' reflected this also. A 'centre' is really something that is top-down driven, something that centralizes things, and this "centralization" was semantically the wrong approach to take. The first name was the Leuven Centre for Entrepreneurial Education. The concept and connotation of "Centre" led people to the impression that we wanted to centralize things, that we wanted to take control of something outside their reach. And what we said at one of our really important meetings at some point was: *'let's completely change the way we approached it and go into what we call a community'*. We changed the paradigm of a top-down approach mentally. So, our epiphany moment was that we were implementing the initiative top-down while we were proclaiming that we	- re-naming the initiative - change in the initial implementation paradigm (from top-down to bottom-up)

wanted to do it bottom-up. The way to do it bottom-up was to forget completely the university hierarchy involved and go to the basics, to the students themselves, and then work out a way into the systems. It is a funny anecdote that I will tell you. We had already a logo designed at one point in time, based on the acronym LCEE, and we did not want to give up that logo. The trick was to change the 'C' designating a 'Center' to 'Community' so that we could keep the acronym anyway. The Leuven Center for Entrepreneurship became the Leuven Community for Innovation driven Entrepreneurship.	
So, these were **the key constituencies**: the awareness about societal changes at the University level, openness to do something about it; the drive from the students; and the changing mindsets which we discovered along the way going from a kind of top-down approach to a completely bottom-up approach. And we used student leverage in the Faculties to get things on the agenda at a very fast pace because the student bodies - which is again one of these **supporting factors** - are represented in the bodies of the Educational Committees of the Faculties. When those engineering students say – *'we want to put entrepreneurship high on the agenda'* – it was not me speaking, it were the engineering students speaking.	- societal changes/the University awareness - openness to do change - drive from students - change of mindsets - a paradigm shift from top-down to bottom-up - students' leverage
And then the last point which I want to make which is also **a positive factor**: in my current role in the tech transfer office I was perceived as a neutral party. If I would be linked to a Faculty, I would be biased or at least perceived to be biased, maybe I could have even had a hidden agenda. In this case, nobody could proclaim anything about the hidden agenda because what I was doing came from the independent part of the University, launching an initiative with the students and for the students with the aim of doing something which was meant to be for all the faculties, i.e., University-wide. The benefit was that because I was working with many different student organizations, I could use the element of competition in people to the benefit of the process. Because students of one faculty will convince their Faculty to take a step, we could of course use this information at the other Faculty, to say, '*do you know that this Faculty is already doing this*?' And since Faculties do not want to be perceived as a lazy Faculty or traditional school faculty, we could accelerate things at the higher pace than if we would just have left it to the Education Committees.	- perception of a representative of LRD as a neutral party - raising the competition
Thus, it is a combination of students' drive, awareness, the way that we have tackled this, the way we have been able to stay away from the existing processes but using them in	- thinking about structure - convincing people

a correct way. We always said, *'we don't want to be perceived as anarchists at the University – we will work with all the structures, but we don't want to create structures just for the purpose of creating new structures because we already have too many structures involved'*. We had a very difficult time to convince people because it had to do with credibility and accountability. Of course, if you are ex officio, if you are given a mandate to do something you will be judged by the way you are fulfilling the mandate. In our way, at the beginning, we really did not have a mandate. We had a project, we had human capital, i.e., people surrounding us. And even today we do not really exist in the organizational structures of the University. If you look at the organizational structure of Faculties and committees, there is no official mentioning of Lcie. Of course, we have a group of people, and we are a kind of endorsed but the level of endorsement goes at the human capital level and not at the institutional level. That was a radical change in a way we approached it. Of course, we had discussions at the Academic Board. We created a lot of papers to convince them that this initiative is good. There were written processes endorsing what we did but it was different compared to creating an organizational structure which is presented in the organigram of the University that you can find in the internet, for instance. This combination of the factors let us to reach the point where we are today.	
Was Lcie a planned or an emergent initiative? A combination of both. On the one hand, it was planned. There were also some personal parameters involved in the sense that it is a kind of coincidence of many things coming together. I was in a position to find opportunities within the university because the previous job which I had was fading out. I had to look for other ways to filling my responsibilities. During this process I learned that there used to be a vacancy of a project coordinator for launching an entrepreneurial centre. They never filled this vacancy because nobody was found with the suitable profile at this point. The position was revived in one, or two or may be three years. Many people mentioned that I could do what we tried to do three years ago. I applied for this position, got selected and it all started. So, it was a planned initiative to do something, and the vacancy presupposed the conceptualization of an "Entrepreneurial Centre". The idea from the start was to create an Entrepreneurial Centre coupling all the initiatives on entrepreneurship within the University, e.g., the coaching sessions organized for the researchers by the technology transfer office; the initiatives of professors starting to introduce entrepreneurship in the curriculum. Because we have a good helicopter view from	- a combination of planned and emergent approach - from 'Centre' to 'Community'

our role as tech transfer employees, we saw that all these individual initiatives were isolated. As 'outsiders' we reckoned that it would be better for the University if we could combine their strengths and align these efforts. Thus, it was in the planned part that we wanted to do something about it. We executed this plan for about two years. Then we reached the epiphany moment when we discovered that the way we had been approaching it was not the right way. After realizing this, the entire process was shifted towards a more entrepreneurial way. We said, *'we involve the students more'*. So, we created *a 'community'*.	
One of the side effects - you remember that we were operating outside of the Faculty structures which was a good thing because it allowed a lot of freedom - was also a limiting factor in the sense that we had almost no budget. And without financial means you cannot really go forward. But - and it is my opinion - scarceness triggers creativity. I see many initiatives that fail although they are very well funded, and I do not mean that in a bad way. But if I would have gotten five hundred thousand euros to start this project, maybe I would have done a big thing - I do not know. But it would have looked completely different, and I would certainly not have involved students in the way that we have done it here. Because working with students was kind of a creative approach, an attempt to find buy-in within the student population. We had to really be creative and grow means to create a story line or a vision that can only be materialized if the stakeholders involved believe in it. In essence, when you start up an initiative – like we see for our spin-offs - you start with a vision and you involve the stakeholders in the vision. But to realize the vision you have to make a financial plan which often at the beginning requires a period when you have to do investments. You have to invest in certain things to develop a product, a prototype whatever to the point when you can grow. And we said, why not to use the same mindset to start our own Lcie initiative. So, we said, *'OK, we have almost no money, but we don't need money – we need resources, we need people to work with us. We need to create a story, so that people believe that entrepreneurship is a good thing for them'*. And we started creating a community of entrepreneurial people.	- financial constraints as creativity stimulating factor - developing and communicating vision
Are you familiar with the theory of Rogers? If you want to start something new, there are always some "early adopters", the innovators in a population of so many different people. There will always be a few people that will believe your story, they will want to work with you, and that's an opportunity. What we did: we activated the early adopters and the innovators in our group of	- activating the network of early supporters - bootstrapping - enforcing synergies and dynamics of interaction

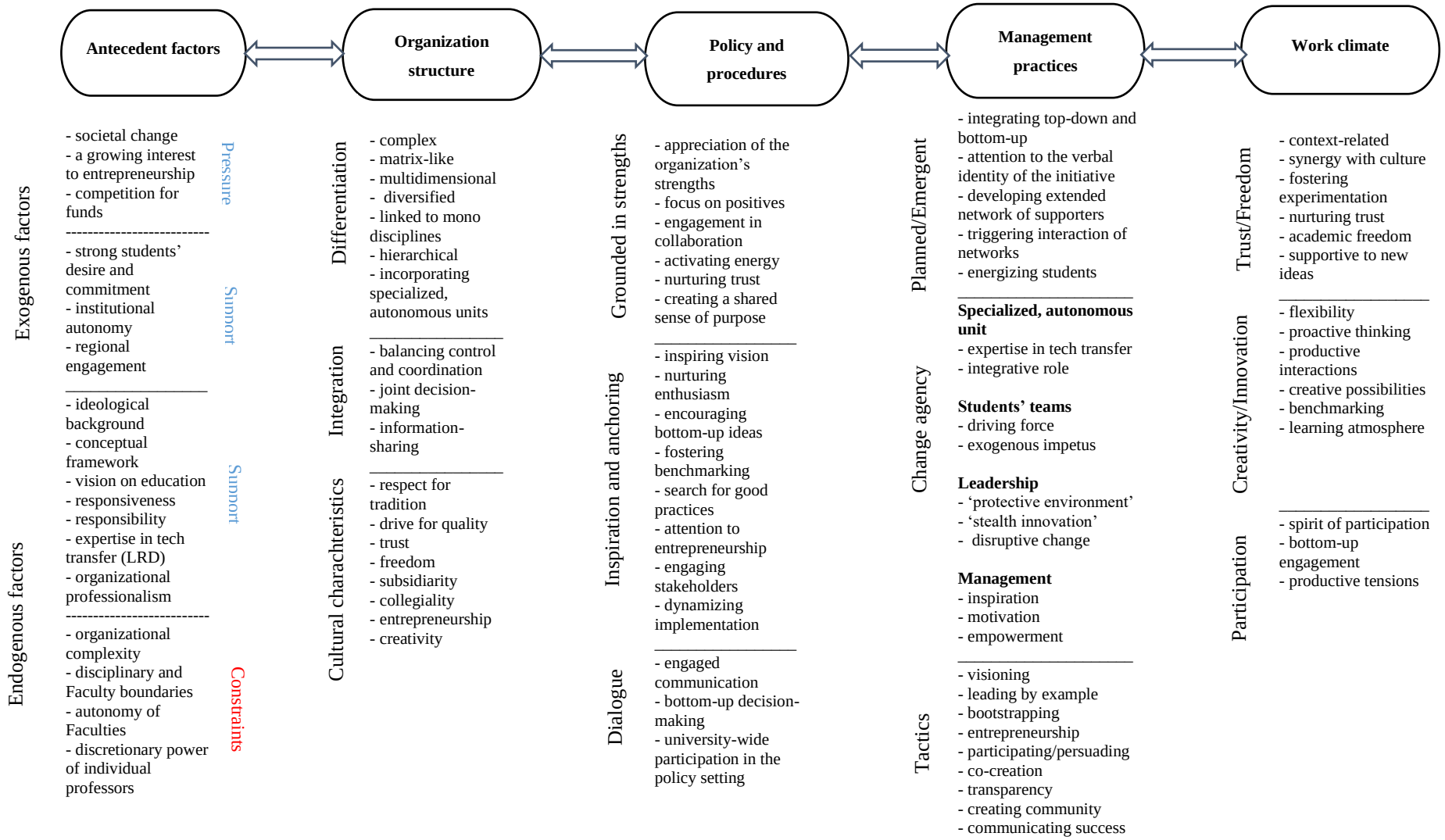
stakeholders – with students, with the faculties, with the professors. There were many entrepreneurial people who wanted to take some of their valuable time because they believed in this story. And this is a kind of a bootstrapping process. By working with some students, some professors, we discovered that the way for institutional change was to become a "higher education MVP" [red: minimal viable product] platform. Because if you want to change something you can either do it top-down or you can spend much time discussing all the pros and cons with everyone who has to have their say and then you can launch it. But the entire process of developing something new can be so long that by the time that you launch it you have already been left behind because the context has changed. So we said, '*let's do what entrepreneurial people would do'*. What they will do: they will create a prototype or an MVP (minimal viable product). We did some kind of experiments, i.e., we developed courses or course/project formats which had a lot of default problems but could demonstrate that by bringing good people together we could achieve success. By activating this network, we discovered that we could do a lot of interesting things that would normally take longer time if you leave it up to the Faculties. Because if you want to create a new course at a certain Faculty, there are many things that you have to take into account, e.g., legal aspects and liability; it has to be available for all students and it has to be comprehensive. But if you do it as a single project for only ten students, if you have an agreement with a professor, you can learn from it. So, we used some kind of an iterative approach to implement it.	
That's a tough question. It was not a black and white thing, but I would tend more towards a cyclical version. It is a combination for me of a cyclical and iterative type of approach in a sense of the turnaround time of a cycle. Because basically what you do is: you inject information in the system and the system will do its thing: it will discuss, it will come back with feedback, and you will iterate on that – that is the sort of cycle you refer to. I think one of the things we did was: we created a new structure of people consisting of mainly the innovators and worked with them. We therefore had a very short iteration cycle. As mentioned, I could have taken the same approach by working with Faculties but if you submit a project or a proposal to a Faculty you will be depending on the inertia linked to a typical Faculty decision-making process which is very long. That's why we stayed completely outside of these decision-making processes. We approached early adopters and those were quick to respond – *'let's see what will happen'*. But the people involved included also those	- cyclical, iterative implementation - developing a diversified network of supporters - fostering entrepreneurial culture

up in higher levels, i.e., we had deans and department heads as well as professors. We found people who were really supportive and who could put things higher on the agenda than what normally could have been done if you would follow a typical approach. That's a kind of the way you build an entrepreneurial culture by working with your allies within your company structure. If you look at entrepreneurship: you have to have a support at the CEO level, you have to have the openness, i.e., the freedom to explore whatever your needs are while still keeping to the direct line of the people at the CEO level, and then, you have to work your way throughout the organizational structure. That's kind of using the politics but in a different way. Based on the intrinsic values of the project, you want to achieve the milestones and key objectives. That's kind of the thing we did. Because the project was launched without any funding, we had to create an entrepreneurial DNA and build it into the way we worked.	
I'll give you an example: at some point in time, we decided that it would be good to have our own incubator – a place for students who want to be entrepreneurial. At that time, there was no place where students could come together to work on their entrepreneurial projects. Normally we would have to look for University funding or ask for an empty building. But the University did not have a spare building that could be used for our purposes. And it was also a very positive factor that we should add to the positive things: we have a local government which is really supportive of entrepreneurship. We talked to them, and the local government (the local province) said, '*yes, we want to support entrepreneurship'*. We believe in your story and we want to make a small budget available for you to start this student incubator project. We made a project proposal, we got a grant, a limited grant of course but enough to get us started to do something. Together with the support of students, together with the small grant of the local province, together with a bit of extra funding from the teach transfer office, we were able to put together a small starting capital. It was big enough to do something but small enough to keep us on the edge. We always had to convince other people to help us. That was our entrepreneurial DNA at work. So, we needed an incubator building, and we found such a building. An older part of this building was vacant for a long time since it had not been maintained very well. So, it was a cheap solution for us to rent the old part of this building, but the building needed renovation. The university wanted to help us, but there was no budget for a complete renovation. Since we could not afford to pay the	- local government support for entrepreneurship - soliciting support from stakeholders - leading by example

amount of money required in an official way, we talked to students, and together, we designed our own blueprints. We told the landlord that we could upgrade his building if he would pay the material costs. We leveraged a bit of budget that way. And in less than eight weeks we did the entire renovation of the incubator building together with several motivated students. We were entrepreneurial. And this created a mindset among the students of: *'hey, these people are really entrepreneurial'.* So, you foster the culture of what you want to achieve with the student population, and that is important.	
Transactional factors? In the time when we were starting the initiative a new policy plan was put in place at the university level. The policy plan highlighted the attention towards entrepreneurship, and it was important. Secondly, there was something very important in this plan, i.e., the "disciplinary future-self" concept. What we discovered was that, on the one hand, we had the vision and the strategy - basically the leadership told the entire organization that we need to put more emphasis on entrepreneurship. On the other hand, the plan highlighted the approach to change which was similar to the one used by implementing Lcie, i.e., from the top-down perspective to the bottom-up perspective. Let me try to explain this with an analogy. When I was a student of this university and wanted to apply for engineering, I received from the University a well-defined package of courses making up the study curriculum. Nowadays, students are in a situation when they can apply for a very flexible program. Everything is digital, and students can start creating themselves majors and minors, so there is a lot more flexibility. In essence, we are going to implement a profound change in higher education institutions where the locus of control shifts from the future plans of the university towards the individual. The University is expecting, and this is related to the concept of the future self, that people should be made more responsible for the choice of what they want to achieve in life, and then create a pathway based on their vision of the future. The university becomes more and more a facilitating entity. It is indeed the same type of change, i.e. from top-down – 'we, as the university, decide' versus 'we, as the university, provide support to your decision'. I remember when I started the initiative I talked to the people from the administration, and we had to make a very important paradigm shift, also at the transactional level. The paradigm that we were working within when we started - at least this is my personal perception of it – was essentially linked to the very strong reputation of KU Leuven. If you look at the reasons why students typically study at KU Leuven, it is because the degree is highly	- attention to entrepreneurship in a new policy plan - a 'disciplinary future-self concept' as the leverage factor - shifting the paradigm or responsibility from the University to an individual - creating entrepreneurial culture

valued by society, or at least, students perceive it to be. It means that students do not really enter the university to be entrepreneurial; rather, they come to get a good degree which they think will lead them probably to a good future because the degree is worth a lot of money. The paradox is that when the students actually get their degrees, they discover that 'I am like one of the five hundred of my class and I am not different in any way'. That's why it is important that we bring the responsibility factor to the individual. When we talked to the people from the administration and the people supporting the educational staff – because those people were basically being put in place to operationalize the vision of the University about these policies – and asked them 'What do you think is our job as a university?', they brought in this paradigm: our mission is to support students to get good degrees. And we said 'no' - we have to change this paradigm in a way that our role as a university is to help people to realize their own future. The degree is just one of the components, and education should be more than that. I'll give you one more practical example. When we first raised the question - suppose you are an entrepreneurial student and you want to become an entrepreneur during your studies – what do we have for such students? The answer was: "we have nothing". So we said, '*how is it possible that we, as the University - and the University is the last step for younger people to move into the labor market – do not offer an option for people who want to create their own career while our job is to prepare people for life after graduation?'* It is this insight that we put into the policy documents indicating that we are able to take the next step or the next level to create the culture supporting entrepreneurship.	

Appendix 8: Chart of the coding scheme



Appendix 9: Samples of email communications with potential participants

- **Sample 1**

Dear… ,

Dr … kindly gave me your contact information to get in touch with you regarding the Lcie-related interview (on hour). My research abstract and interview questions are attached to this email. The interview will be conducted on a flexible way – the interview questions will serve as a framework to discuss the issue of how Lcie was started at KU Leuven. The purpose of the interview is to get your perspective on key factors that influence the implementation of Lcie as a large-scale university change initiative.

To get reliable data for my qualitative research, I would need to make audio recording of the interview. Herewith I confirm that the interview recording will be used only for this study and will not be disseminated anywhere else. Further, I will strictly follow the established ethical principles to ensure that research participants' rights are protected. Would it be agreeable to you if I make audio recording of the interview?

I am traveling on June 20-26. Could we arrange a skype interview before June 20 or after June 26?

Thank you very much in advance.

With kind regards,

Helene

Dear Helene,

I am more than happy to help you with your research. And I do not have any problems with you recording the interview.

These are possible dates that would suit me … Could you please confirm what date and hour is possible for you to conduct the interview?

You can address yourself at our reception desk …. My colleagues will show you the way to my office.

Looking forward to meet you.

Kind regards,

Dear… ,

Thank you very much! Would it perhaps be possible to meet with you on skype - it would be difficult for me to come to Leuven in the period indicated. Could we arrange a skype interview with you on … (day) at … (time) or earlier if it would be more convenient for you?

With kind regards,

Helene

Dear Helene,

A skype call at… (time) on … (day) is perfect for me.

See you then!

Kind regards,

Dear… ,
Thank you very much for agreeing to be interviewed for my doctoral research and for the very relevant interview. I will keep thinking about the concept of … that you mentioned during our discussion today.

Again, thank you so much for taking the time to talk with me today. I do appreciate it.

Kind regards,

Helene

Dear Helene,

You are more than welcome! The pleasure was all mine. I wish you all the best with the rest of the interviews and the Lcie research within your doctoral study.

Kind regards,

- **Sample 2**

Dear … ,

Thank you very much for the willingness to give an interview. My research focus, interview questions as well as my meeting schedule in Leuven are attached to this email.

The interview (one hour) will be conducted in a flexible way. The questions will serve as a framework to discuss the pertinent issues of change and development related to conceptualization and implementation of Lcie.

To get reliable data for my qualitative research, I would need to make audio recording of the interview. Herewith I confirm that the interview recording will be used only for this study and will not be disseminated anywhere else. Further, I will strictly follow the established ethical principles to ensure that research participants' rights are protected.

- Would it be agreeable to you if I audio record the interview?
- Could you let me know if you would prefer to do the interview in Leuven or via skype? What date/time would be convenient for you?

Thank you very much for your time. I do appreciate it.

With kind regards,

Helene

Dear Helene,

I'm fine with your recording the interview.

If it still fits your schedule, I'm available on (day) from ... till ... at ... (location).

Otherwise, Skype is also fine with me.

Best,

Dear …,

Thank you very much for the very informative interview and for taking the time to meet with me. Your input and perspective on the development and implementation of Lcie is most relevant to my research.

Again, thank you so much for you time and for the interview. I do appreciate it.

With kind regards,

Helene

- **Sample 3: Email to the Vice Rectors' Secretary**

Dear …,

Please find attached my research summary and interview questions. I've also attached a brief description of the research purpose and general interview questions to provide a better view into my research goals and objectives. The interview will be conducted in a flexible way. The purpose of the interview is to get a senior leadership perspective on how the KU Leuven vision on education based on social constructivism, culture of dialogue and appreciative inquiry approach impact motivation and attitude to change of various stakeholders and thereby, foster the development and implementation of the university-wide change initiatives such as Lcie.

To get reliable data for my qualitative research, I would need to make audio recording of the interview. Herewith I confirm that the interview recording will be used only for this study and will not be disseminated anywhere else. Further, I will strictly follow the established ethical principles to ensure that research participants' rights are protected. Could you ask Vice Rector … and Vice Rector … if they would permit to audio record the interviews?

Please convey my deep gratitude and appreciation to Vice Rector … and Vice Rector …. for taking the time and for giving me the opportunity to interview.

With kind regards,

Helene

Dear Helene, they both agree that you make an audio recording of the interviews.

Kind regards

Dear …,

Please pass along my sincere gratitude and appreciation to the Vice Rector … and the Vice Rector … for taking the time out of their busy schedules and for giving me the opportunity to interview. The conversation we had gave me a valuable insight into the distinctive character of KU Leuven, i.e. the culture of trust which is crucial for creating supportive environment for innovation and continuous improvement.

Again, very many thanks to the Vice Rector … and the Vice Rector …. and thank you very much for helping arrange this valuable interview.

With kind regards,

Helene